

# MATHEMATICS

Class - 4



2019-20

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State Council of Educational Research & Training Chhattisgarh, Raipur

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## PREFACE

After the creation of Chhattisgarh state, the responsibility of creating new text books for children of the state has been assigned to State Council of Educational Research and Training. The books have been created by keeping in view the social, cultural and geographical background of the state.

It has also been kept in mind that the new vision which is being made in the context of the children at the national level can also benefit the children of the state.

These books were tested for two years in various areas of the state. As per the feedback of teachers, parents, children and academicians some changes were made.

At the time of creation of this mathematics text book the main thing that was put forward was that learning mathematics can be joy for children if they can relate our environment to it. Mathematics should not be confined to the text books. The knowledge of process of addition, subtraction, multiplication and division is not enough. The learner should also be able to apply these processes appropriately in real life situations. Pictorial representations have been used in the text book so that the learners easily relate mathematical concepts and process to their surroundings.

This book addresses children with easy language. It has been kept in mind while making the entire book that all the symbols and words are familiar to children. Wherever it is very necessary to use mathematical words, they are used with examples. To keep the learning process from being burdensome and boring several interesting activities have been given. By doing these activities individually or in groups, the learners will learn easily.

It has been kept in mind that the activities, examples and figures given in book are related to children's experience and interest.

According to the National Curriculum Framework-2005 the purpose of mathematics is not merely following the algorithm and getting the result. Hence in this text book, we have put emphasis on understanding, discussion and interaction of children. There are several such lessons in the book in which children have been asked to discuss many issues with their friends and teachers. We also recognize that if children use their own language to create logical framework their concepts will be strong and clear. Here the teachers are expected to create a rapport and let them speak openly about those issues. Teachers need to listen to them and if the children are having trouble to reach the conclusion then help them. Hope this text book will be helpful in keeping the environment of the school entertaining and exciting.

In preparing these books the council has got continuous cooperation from teachers, academicians and linguist of governmental and nongovernmental sector. The council is grateful to all of them.

It is our responsibility to make our future generation beautiful. We hope that we will all be able to do something good.

Director

State Council of Educational Research and  
Training Chhattisgarh, Raipur



### SUGGESTIONS FOR TEACHERS AND PARENTS

There have been continuous efforts to make teaching-learning processes interesting and effective. There have been efforts to understand the objects of having different disciplines in the school syllabus and to understand and explain nature of each subject. Yet in teachers and children a reflection on clarity and good understanding does seem to be evident. This is particularly true about mathematics.

If you were to pose the question, “What is mathematics?”, the answers would range from counting objects, displaying numbers, doing number operations, lines, making shapes and so on. A few answers might differ from the ones cited above, but these would be largely the things mentioned.

Before we go ahead, let us try and understand what all happens when we are attempting to solve a problem in mathematics. For example, “A bus travels a distance of 35 kilometers in 1 hour. How far will it travel in 6 hours?”

Here, time is an abstract concept. We have defined an interval as the unit of this abstract concept and expressed large time intervals in terms of these units. Similarly, for distance, we have defined a unit, which then helps us quantify it.

In the next step we explore the relationship between these two units of time and distance. We have stated, “The bus travels a distance of 35 kilometres in 1 hour”. This defines a relationship, which we translate in term of an operation—for instance, either addition or multiplication.

Let us consider another example. A kilogram of rice costs Rs. 16. How much will 54 kilograms of rice cost?

In this example, we have again defined a unit for quantity of rice, and expressed the total quantity in terms of the unit. The same can be observed while solving problems related to area, etc. It is clear from these examples that mathematics is not just limited to counting or operations on numbers. In the same way, mathematics of shapes and lines is about exploring and establishing the relationships between them. Further, while we include the concept of measurement for use, the sorting, classification searching for and establishing their properties, constitute important facets of mathematics.



When a child begins learning mathematics, in order to express abstract ideas understand operations as well as simple problems faced in daily life, it becomes necessary to use concrete (real physical) objects. However, this dependence on real objects progressively decreases as mathematical skills develop.

Children then begin to build arguments. Their ability to deal with abstractions increases. They begin to abstract arguments from their daily life, and translate abstractions into reality. They also begin to seek solutions to problems of their own accord using various methods. This whole process helps children understand how and where available information can be used to solve problems.

Therefore, it is imperative that in the teaching of mathematics children be allowed to have maximum opportunity to think and work independently. This will only happen if children are not provided with ready-made solutions, and are instead encouraged to think on their own, with guidance towards the right direction. This might seem strange in the beginning, but it is difficult to teach mathematics without developing the ability to think independently and take decisions on the basis of this thought. The development of this ability will make the children self-confident and reduce the fear of mathematics that is widely prevalent.

The class 1 textbook has been developed keeping in mind that it could be used by teachers as a guide and for self-learning by children. We have also tried to provide many opportunities for students following this textbook to think and act independently.

Beginning mathematics using concrete objects and games generates interest amongst the children. Therefore, we have also begun the book with games. The first section develops the ability to focus and concentrate, develop, eye-hand coordination, learn to sort and classify objects, and make pairs. These are through games and would help develop the abilities for sorting, classification, understanding one to one correspondence and comparing quantities.

It is expected that children will be given sufficient time to use as concrete objects while working on the materials given in the book. We have given some examples of the concrete objects that can be used for this purpose but you have to think of some more. Some suggestions can also be seen from the teachers' guide which is being published separately. The purpose of having children engaged with activities



with concrete objects and for creation of supplementary materials for games is to ensure that they work with concrete objects while learning new concepts. They should work on their own, understand operations and slowly move towards greater abstractions. In this period they should be given opportunities to use language in the context of these concepts and operations. These occasions should be both in small groups and in common situations along with teachers so that they can build their self confidence. If there is an opportunity in each chapter to do this then many difficulties that arise in learning Mathematics would be destroyed from the root. Children would develop different attitudes towards mathematics there is a need to pose for a while and think about this point.

Children love stories. One sees children completely engrossed in a story being told to them, especially, if it being related well. In order to understand mathematics because of its abstraction it is useful to have it embedded in stories or contexts, understanding and enjoying stories is a prerequisite. Keeping this in mind, some characters have been created in the textbook. Children can be encouraged to name these characters imaginatively and a short story could be woven around them at the beginning of the lesson. Problems can be posed through play, activities with concrete objects and stories, which would help children form their own base for understanding mathematics better.

No lesson or activity is complete in itself. The materials in the text are just indicative. According to the needs of your classroom and the interest of the children, develop and use new materials, new interesting activities and new games. We have given some suggestions for this purpose. Wherever extra things can be thought of symbols at the bottom of the page show what is possible according to use. The key to the symbols is given at the beginning of the book. Children could be encouraged to interpret the symbols and complete the activities on their own.

**To summarise:-**

- ☐ Children must be given the opportunity to flip through their books, look at the pictures given and attempt to read in an independent manner
- ☐ Every page of the textbook contains interesting activities and practice exercises. Make more such tasks, ask children to develop them and also to solve them.



- ☐ Children must be given sufficient time to understand and learn a new concept. Children develop new techniques to understand concepts, and must be encouraged in these endeavors.
- ☐ The objective of solving problems is to understand the underlying mathematical concept. Solving a select set of questions or rote learning of select solutions is not the correct way to teach mathematics. Children must, therefore, be encouraged to solve problems as well as develop new problems.
- ☐ Mistakes are a natural process of learning while learning a concept or in solving problems. Children must not be discouraged on mistakes. Instead, they should be encouraged to develop new methods and ways to solve problems.
- ☐ Children learn from their peers, and therefore, must be encouraged to indulge in conversations and group work, and then to present the work that was done in the group.
- ☐ If children have difficulty in solving a problem guidance can be provided in the form of pointed questions that help students think along a certain direction.
- ☐ The materials mentioned in the book are indicative. Please develop and use new materials, innovative games, exercises, and activities depending on the needs, interest and background of the children. The use of symbols in the book indicates the areas where this is possible. Children should be encouraged to understand the symbols independently and work according to the instructions given.

This book is an attempt to dialogue with the teachers/parents and children. All suggestions to improve the book are invaluable and you must please send these to the SCERT.

**Director**

State Council of Educational Research and Training  
Raipur (Chattisgarh)

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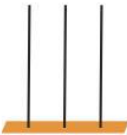

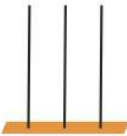
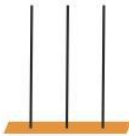




# UNIT 1

## NUMBERS

### Introduction to Thousand

Answer and show it in the abacus also :

		Least Number	Greatest Number
—1.	Least number and greatest Number of one digit _____, _____		
—2.	Least number and greatest Number of two digits _____, _____		
—3.	Least number and greatest Number of three digits _____, _____		

**Now answer**

$9 + 1 = \text{_____}$ , What comes after 9 ———

$99 + 1 = \text{_____}$ , What comes after 99 ———

**In this way**

$999 + 1 = \text{_____?}$ , What comes after 999 ———



## Mathematics - 4

Raju and Chanda are also trying to know

There are nine beads in the ones, tens and hundreds column of the abacus. In this way it exhibits the number nine Hundred ninety nine .  
What will happen If one bead is increased in ones place

If we try to put one more bead in the column of ones it will not come on it because only 9 beads can be there



Then we have to vacate the ones columns, In place of these ten beads and put one bead in tens column.

But already there are nine beads in the tens column  
So vacate the tens column and in place of these ten beads put one bead in hundreds column.



Oh , but already there are 9 beads in hundreds column.  
Now what to do?

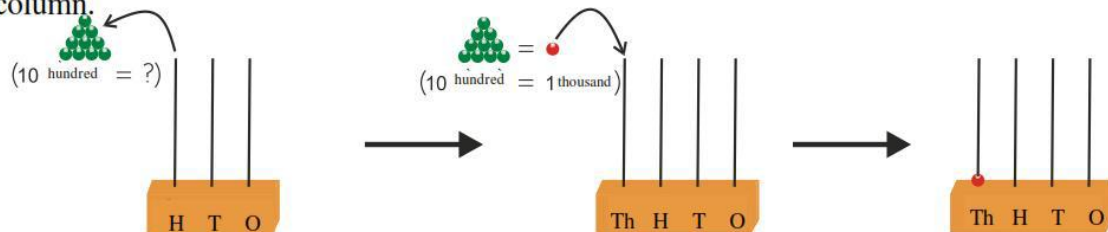


Now tell what will Raju and Chanda do?



## NUMBERS

Vacate the hundreds column and in place of these nine beads we have to put one bead in next column. Thus we need a new column. This means a new place. This new place is called thousands. Therefore in place of ten beads of hundreds we put one bead in thousands column.



**Now answer -**

What will be the number if you add 1 with 999 ? -----

**In the same way-**

$$1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 = 10$$

i.e. ten ones = ..... ten

$$10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 = 100$$

i.e. ten tens = .....hundreds

**In the same way-**

$$100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 = 1000$$

Ten hundreds = .....thousands

**Raju and Chanda have exhibited some numbers in abacus. Count the numbers and write them in figures and in words.**

The image shows three abacus diagrams. The first abacus has 3 red beads in the Th column, 1 green bead in the H column, 4 blue beads in the T column, and 2 black beads in the O column. Below it is a box containing the digits "3 1 4 2" and another box containing the words "Three thousand one hundred fortytwo". The second and third abaci are empty. Below each abacus is a box for the number in figures and a box for the number in words.

## Mathematics - 4

Write the numbers in figures and words.

1. 4321 .....
2. 1234 .....
3. 2222 .....
4. .... six thousand nine hundred fifty
5. 7089 .....
6. .... eight thousand six hundred two
7. .... nine hundred ninety
8. 3007 .....
9. 5671 .....
10. .... six thousand seven hundred sixty one

Circle on the correct number

Three thousand seven hundred fifty nine	769	3759	3957	3579
Five thousand three hundred twenty	5302	5203	5320	5032
One thousand two	1002	1020	1200	1000
Six thousand ten	60010	6010	6100	6001
Two thousand three hundred sixty nine	2369	2963	2379	230069
Four thousand two hundred ten	40210	4210	4012	40120

Complete the following :

1. 1234 = 1 Th + 2 H + 3 Tens + 4 Ones = 1000 + 200 + 30 + 4
2. 2430 =  +  +  +  =  +  +  +
3. .... =  +  +  +  = 3000 + 100 + 0 + 5
4. .... = 6 Th + 0 H + 8 Ten + 8 Ones =  +  +  +
5. .... =  +  +  +  = 5000 + 400 + 0 + 0
6. .... = 9 Th + 0 H + 0 Ten + 1 Ones =  +  +  +





## Mathematics - 4

Write the greater number.

	Greater number	How do you come to know?
1. 5336 and 2336	<input type="text"/>	<input type="text"/>
2. 2135 and 2155	<input type="text"/>	<input type="text"/>
3. 1523 and 1323	<input type="text"/>	<input type="text"/>
4. 3427 or 3347	<input type="text"/>	<input type="text"/>

Find out the wrong statement and right statement. Correct the wrong statement.

For example —  $5356 > 4213 > 3415 > 2999$  (right)

- |                                |     |       |
|--------------------------------|-----|-------|
| 1. $1515 < 5151 < 6345 < 7135$ | ( ) | ..... |
| 2. $1239 < 1042 = 1043 > 1051$ | ( ) | ..... |
| 3. $8976 < 8796 > 7321 > 5432$ | ( ) | ..... |
| 4. $5601 < 6510 < 7345 < 8342$ | ( ) | ..... |
| 5. $4259 < 5942 > 6724 > 9243$ | ( ) | ..... |

Select any five numbers. Arrange them in descending order first and then in ascending order using lesser than or greater than sign.

Without repeating the numbers read and write as many numbers as you can -

1. Make two digit numbers with 3 and 8 and read -

.....

2. Make two digit number with 2 and 4 and read -

.....





## NUMBERS

3. Make three digit number with 1 , 2 and 4 and read -

.....

4. Make three digit number with 5 , 6 and 0 and read -

.....

5. Make four digit numbers with 3,4,7 and 9 and read -

....., ..... , ..... , ..... , .....

....., ..... , ..... , ..... , .....

....., ..... , ..... , ..... , .....

....., ..... , ..... , ..... , .....

6. Make four digit numbers with 1,2,5 and 0 and read -

....., ..... , ..... , ..... , .....

....., ..... , ..... , ..... , .....

....., ..... , ..... , ..... , .....

....., ..... , ..... , ..... , .....

How many numbers are there ?

**Using the numbers given below make the smallest and the greatest number.  
Remember that no digit should be repeated.**

	Smallest number	Greatest number
1. 1,-2,-3,-4	<input type="text"/>	<input type="text"/>
2. 3,-0,-2,-5	<input type="text"/>	<input type="text"/>
3. 8,-7,-6,-9	<input type="text"/>	<input type="text"/>
4. 4,-2,-8,-1	<input type="text"/>	<input type="text"/>
5. 5,-9,-0,-2	<input type="text"/>	<input type="text"/>

Till now you have learnt upto 9999. Ten digits are used in making these numbers.

## Mathematics - 4

Write here which are those numbers?

Can you write any number without using these digits ? \_\_\_\_\_

Do you know the different ways to write these numbers?

**See the picture of the clock-**

You must have seen these types of figures in clocks. These signs are Roman signs. These are called Roman Numbers.

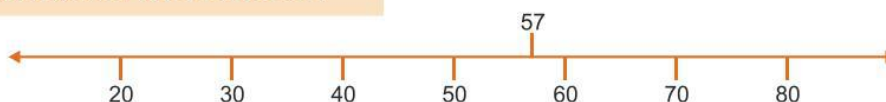
**By seeing the picture of the clock write first ten Roman Numbers :**

1	2	3	4	5	6	7	8	9	10
I								IX	

There is no sign for zero in Roman Numbers.

In Roman Number only seven symbols are used :

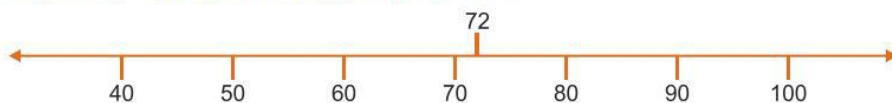
I	V	X	L	C	D	M
1	5	10	50	100	500	1000

**Which number is nearer to :**

57 is the number which comes between 50 and 60.

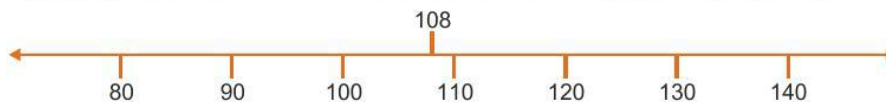
57 is nearer to which number 50 or 60 ? -----

Thus 60 is nearer to 57, which is the nearer value of tens?

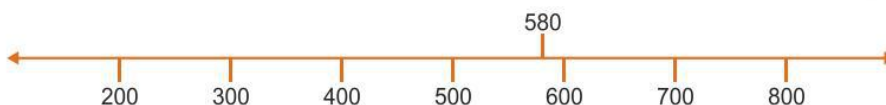


72 is the between 70 and 80

72 is nearer to which number ? \_\_\_\_\_ Thus the nearest tens value of 72 is \_\_\_\_\_.



108 is nearer to which number? \_\_\_\_\_. Thus the nearest tens value of 108 is \_\_\_\_\_.

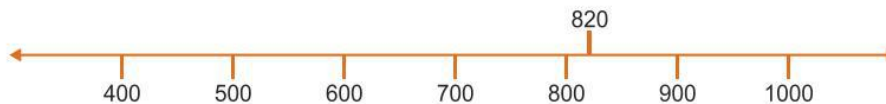




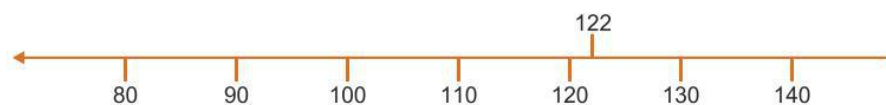
## NUMBERS

580 is between 500 and 600

580 is nearer to which number? \_\_\_\_\_ Thus the nearest hundred value of 580 is \_\_\_\_\_.



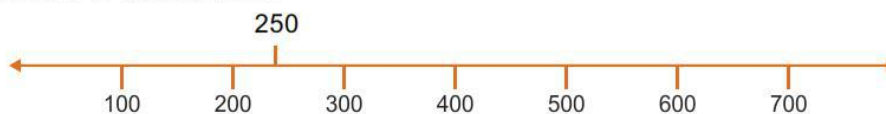
820 is nearer to which number?----- What is the nearest hundred value of 820 -----



122 is nearer to which number ?----- Thus the nearest hundred value of 122 is -----

**In special cases, if a number is just between any two numbers then how will you calculate the nearest hundred value of that particular number.**

Eg. 250 is nearer to which number



250 is just in between 200 and 300. In this case the nearest hundred value of 250 will be 300. Thus the nearest hundred value of 250 is 300.

- Find out the nearest tens value of the following numbers.

24, 65, 92, 148

- Find out the nearest hundreds value of the following numbers.

235, 709, 676, 550

- Find out the nearest tens and hundreds value of the following numbers.

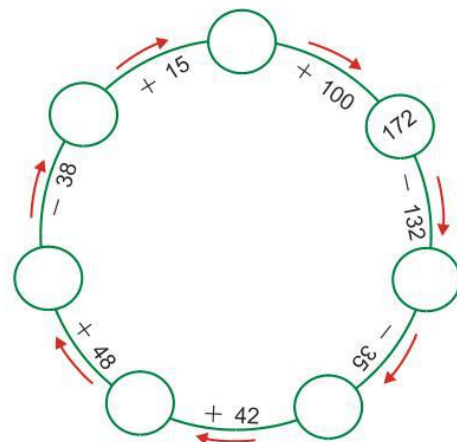
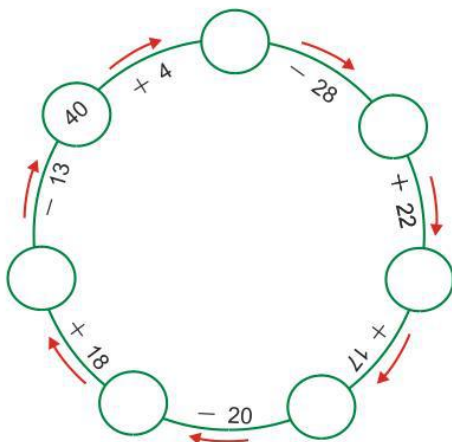
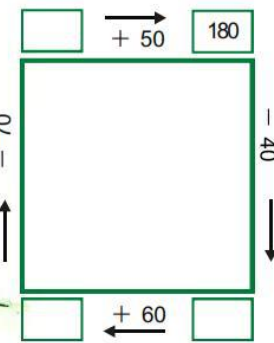
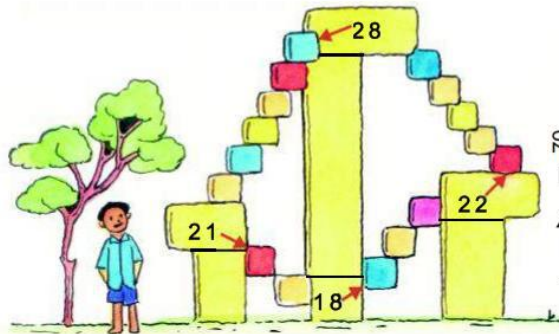
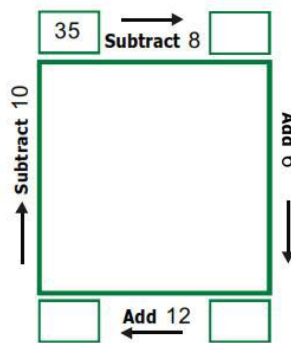
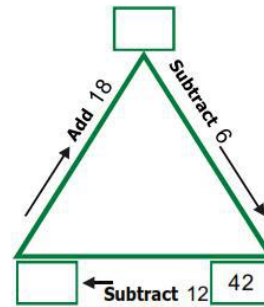
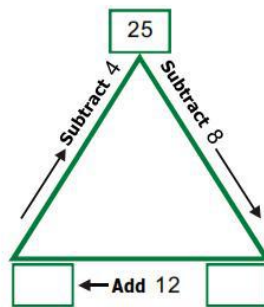
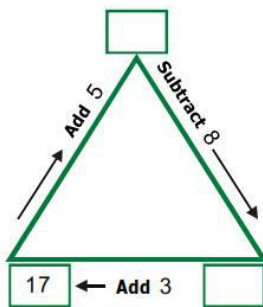
138, 559, 427



## UNIT 2

# ADDITION & SUBTRACTION

Write numbers in the boxes as shown.





ADDITION & SUBTRACTION


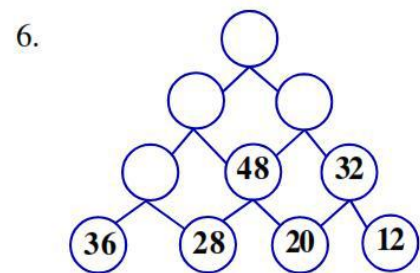
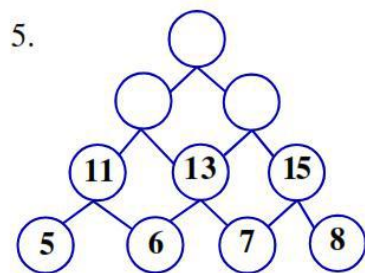
Understand the pattern and proceed.

1.  $1+2+3 = 6$   
 $2+3+4 = 9$   
 $3+4+5 = 12$   
 -----  
 -----  
 -----

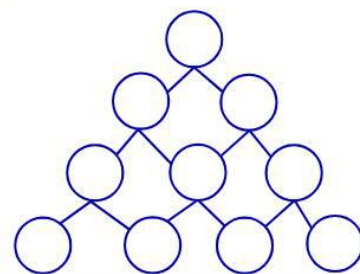
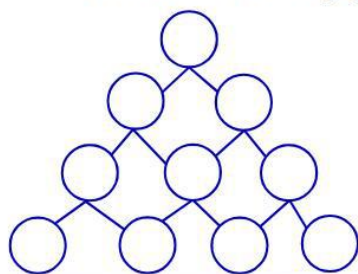
2.  $1+2+3 = 6$   
 $4+5+6 = 15$   
 $7+8+9 = 24$   
 -----  
 -----  
 -----

3.  $2+4+6 = 12$   
 $8+10+12 = 30$   
 -----  
 -----  
 -----

4.  $1+3+5 = 9$   
 $7+9+--- =$   
 -----  
 -----  
 -----

In the same way you also make two patterns :-



## Mathematics - 4

**Number game:**

Select any number from the table. Do calculation using other numbers from the table to get the number you have selected :-

43	12	69	5	51	85
24	45	64	49	36	59
16	15	10	19	73	34
14	6	7	28	52	31
38	13	21	43	4	60
79	90	32	17	9	40

By selecting the number 64 you find the number in this way:

$$60 + 4 = 64,$$

$$73 - 9 = 64,$$

$$69 - 5 = 64$$

- Add numbers the result of which will be 34.
- Subtract numbers the result of which will be 34.

Some answers are given below. Form questions from these numbers:

- Answer is 35
- Answer is 44
- Answer is 21
- Answer is 12

If the answer is 18 then the question may be as follows

- What will you get by adding 9 to 9 ?
- One basket carries 9 mangoes. How many mangoes will be there in such two baskets?
- What is the answer of  $25 - 7$  ?
- What is two times of 9 ?
- $9 \times 2 = \dots\dots\dots$

Add and subtract in the following boxes

+	731	605	615
210	941		
318			
605			

—	881	7005	6382
613		6392	
780			
103			



ADDITION & SUBTRACTION

Make questions:

Example-

$$\begin{array}{r} \boxed{5} \boxed{0} \\ - \boxed{2} \boxed{5} \\ \hline \boxed{2} \boxed{5} \end{array} < \begin{array}{r} \boxed{2} \boxed{5} \\ + \boxed{1} \boxed{0} \\ \hline \boxed{3} \boxed{5} \end{array}$$



$$\begin{array}{r} \boxed{\phantom{0}} \boxed{\phantom{0}} \\ - \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{4} \boxed{8} \end{array} > \begin{array}{r} \boxed{\phantom{0}} \boxed{\phantom{0}} \\ + \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{\phantom{0}} \boxed{\phantom{0}} \end{array}$$

$$\begin{array}{r} \boxed{9} \boxed{\phantom{0}} \\ - \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{7} \boxed{8} \end{array} > \begin{array}{r} \boxed{\phantom{0}} \boxed{\phantom{0}} \\ + \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{\phantom{0}} \boxed{9} \end{array}$$

$$\begin{array}{r} \boxed{\phantom{0}} \boxed{\phantom{0}} \\ - \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{3} \boxed{8} \end{array} = \begin{array}{r} \boxed{1} \boxed{4} \\ + \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{\phantom{0}} \boxed{\phantom{0}} \end{array}$$

$$\begin{array}{r} \boxed{\phantom{0}} \boxed{\phantom{0}} \\ - \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{2} \boxed{7} \end{array} < \begin{array}{r} \boxed{\phantom{0}} \boxed{\phantom{0}} \\ + \boxed{\phantom{0}} \boxed{\phantom{0}} \\ \hline \boxed{\phantom{0}} \boxed{3} \end{array}$$

See the table and give the answers:

221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260

How much more is 231 than 221 —————

How much more is 241 than 231 —————

How much more is 251 than 241 —————

How much more is 243 than 242 —————

How much more is 244 than 243 —————

How much more is 245 than 244 —————



## Mathematics - 4

**Follow the same pattern and find their difference:**

Select any one number from the table. Add two numbers from below. Now add the two numbers from its left side. In the end find out the difference between the sum of these two numbers.

**Example :**

If you select 237 then the sum of two numbers  $247 + 257 = 504$  and the addition of the left side number  $= 236 + 235 = 471$ . The difference between 504 and 471 i.e  $504 - 471 = 33$

**Do the same with three more numbers. Is there anything special in the answer. Why does this happen?**

The question given below are solved by Rahul and Riya. Tell who has solved the questions correctly. Write his/ her name in the box.

$712 + 18,$

$216 + 17,$

$762 - 176,$

$800 - 191$



**The question done by Rahul**

$$\begin{array}{r} 712 \\ + 18 \\ \hline 7210 \end{array}$$

$$\begin{array}{r} 216 \\ + 17 \\ \hline 233 \end{array}$$

**The questions done by Riya**

$$\begin{array}{r} 712 \\ + 18 \\ \hline 730 \end{array}$$

$$\begin{array}{r} 216 \\ + 17 \\ \hline 386 \end{array}$$

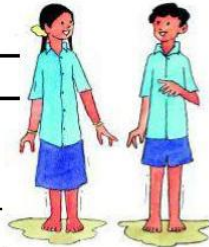
## ADDITION &amp; SUBTRACTION

$$\begin{array}{r} 762 \\ - 176 \\ \hline 586 \end{array}$$

$$\begin{array}{r} 800 \\ - 191 \\ \hline 609 \end{array}$$

$$\begin{array}{r} 762 \\ - 176 \\ \hline 614 \end{array}$$

$$\begin{array}{r} 800 \\ - 191 \\ \hline 791 \end{array}$$

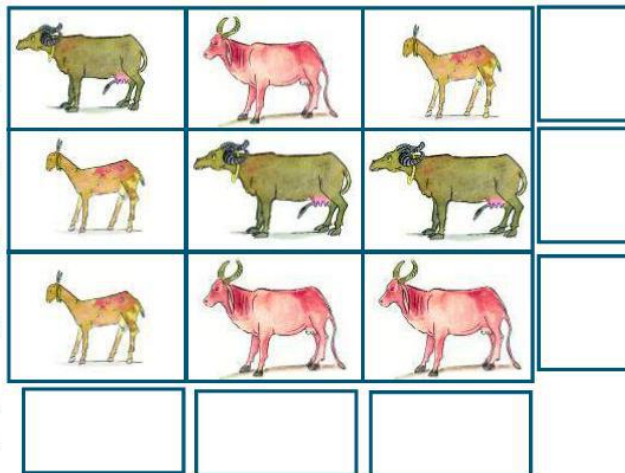


Discuss with your friends who has made the mistakes and where?

**How much price ?**

The price of a buffalo is Rs 5000/- . The cost of a cow is Rs 3000 and the cost of a goat is Rs 1000. See the picture and say:

1. Add the cost of all the animals in each column and write the answers in the blank box.
2. Write the total cost of the cows in the given box.
3. Tell the total cost of two cows and two goats.
4. Tell the total cost of 1 cow and 3 goats.
5. How many goats can be purchased in the price of one buffalo?
6. Shalu purchased one cow, one buffalo and one goat. After that she had sufficient money to purchase a goat. Tell how much money she had.

**Add in expanded form**

**Example :** Add 3453 to 5286.

3453 = Three thousand + Four hundred + Five tens + Three ones

3453 = 3000 + 400 + 50 + 3

**In this way**

5286 = 5 thousands + 2 hundreds + 8 tens + 6 ones

= 5000 + 200 + 80 + 6

**Thus**

$$\begin{array}{r} 3453 = 3000 + 400 + 50 + 3 \\ + 5286 = 5000 + 200 + 80 + 6 \\ \hline 8000 + 600 + 130 + 9 \end{array}$$



## Mathematics - 4

Therefore 8 Th + 6 Hundreds + 13 Tens + 9 Ones

Or 8 Th + (6+1) Hun + 3 Tens + 9 Ones

Or 8 Th + 7 Hun + 3 Tens + 9 Ones

**Example :** Add 6875 to 2749

$$6875 = 6000 + 800 + 70 + 5$$

$$2749 = 2000 + 700 + 40 + 9$$

$$\underline{8000 + 1500 + 110 + 14}$$

8 Th + 15 H + 11 T + 14 Ones

Or 8 Th + 15 H + 12 T + 4 Ones

Or 8 Th + 16 H + 2 T + 4 Ones

Or 9 Th + 6 H + 2 T + 4 Ones

**The sum is 9624**

**Brief form :**

$$\begin{array}{r} 1\ 1\ 1 \\ 6\ 8\ 7\ 5 \\ + 2\ 7\ 4\ 9 \\ \hline 9\ 6\ 2\ 4 \end{array}$$

**Write the answers in expanded form :**

1. 2721 and 2620

2. 3510 and 2410

3. 4618 and 3206

4. 7390 and 2000

5. 5881 and 2830

6. 8215 and 1037

### The difference in expanded form

**Example :** The difference of 8657 and 6523

$$8657 = 8000 + 600 + 50 + 7$$

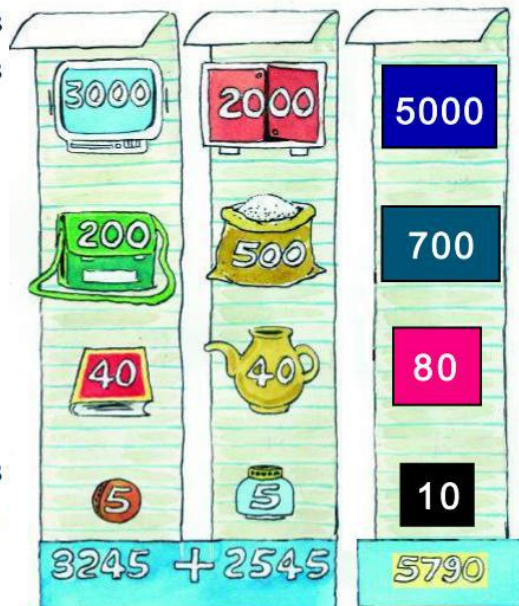
$$- 6523 = 6000 + 500 + 20 + 3$$

$$\underline{2000 + 100 + 30 + 4}$$

2 thousand + 1 hundred + 3 tens and 4 ones

**Example :** Subtract 4875 from 6324.

$$\begin{array}{r} 5000 \quad 200 \quad 10 \quad 10 \\ 6324 = \cancel{6000} + \cancel{300} + \cancel{20} + 4 \\ - 4875 = 4000 + 800 + 70 + 5 \\ \hline 1000 + 400 + 40 + 9 \end{array}$$



## ADDITION &amp; SUBTRACTION

$$1 \text{ Th} + 4 \text{ Hun} + 4 \text{ Tens} + 9 \text{ Ones} = 1449$$

Thus

$$\begin{array}{r} 6324 \\ - 4875 \\ \hline 1449 \end{array}$$

**Subtract in expanded form :**

1. 2100 from 6301      2. 3000 from 5810      3. 4210 from 5380
4. 4000 from 5000      5. 6000 from 6000      6. 1037 from 8215

**Addition of numbers having 3 digits :****Example :**Add **147**, **253** and **268**

	H.	T.	O
		1	
	1	4	7
+	2	5	3
+	2	6	8
			8

	H.	T.	O
	1	1	
	1	4	7
+	2	5	3
+	2	6	8
		6	8

	H.	T.	O
	1	1	
	1	4	7
+	2	5	3
+	2	6	8
	6	6	8

**Brief form :**

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

Solve these :

1.

	1	2	7
+	2	1	0
+	2	4	2

2.

	1	2	4
+	2	6	7
+	7	1	3

3.

	1	4	5
+	2	4	6
+	1	3	2

4.

	1	1	5
+	1	0	6
+	7	0	3

## Mathematics - 4

Number 1 to 100 are written in these boxes.

In number 13, the sum of both the digits  $1+3=4$ . In the same way, in number 57 the sum of both the digits is  $5+7=12$  and  $1+2=3$ .



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

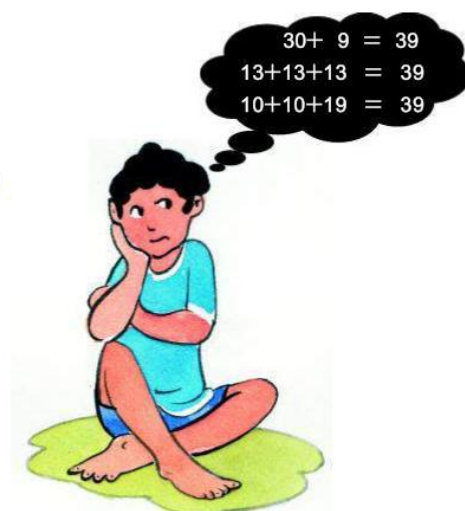
Now in these boxes write the sum of the digits & complete the square.

A 10x10 grid with a light green background and dark green lines. The number '4' is written in the second column, fourth row. The number '3' is written in the sixth column, sixth row.

Do you find some order in these numbers written in squares?

**Write three numbers, the sum of which is 125 -**

27	+	50	+	48	=	125
	+		+		=	125
	+		+		=	125
	+		+		=	125
	+		+		=	125





## ADDITION &amp; SUBTRACTION

**Solve these questions -**

1. There are 438 students in Patel Para School. Out of which 198 are girls. What is the number of boys in the school ?
2. In a garden, there are 245 mango trees, 368 guava trees and 154 papaya trees. What is the total number of trees in the garden ?
3. In a school there are 435 Hindi books, 412 Maths books and 138 English books. Write the total number of books.
4. One boy purchased a copy containing 360 pages. He wrote on 272 pages in a few days. How many pages are blank ?
5. Hindi, Mathematics and English books contain 368, 370 and 205 pages respectively. Find the total number of pages.
6. In an election of the gram panchayat first candidate got 638 votes, the second candidate got 758 votes and was elected. Say, the candidate was defeated by how many votes?
7. 352 and 256 guavas were plucked from two different gardens. Tell, How many more guavas were plucked from first garden?

**The addition of 4 digits numbers :****Example :** Add 4538 and 3485.

	T.	H.	T.	O
	①	①	①	
	4	5	3	8
+	3	4	8	5
	8	0	2	3

**Solve these-**

- |   |   |   |
|---|---|---|
| 1. $\begin{array}{r} 4385 \\ + 2876 \\ \hline \hline \end{array}$ | 2. $\begin{array}{r} 5738 \\ + 2575 \\ \hline \hline \end{array}$ | 3. $\begin{array}{r} 3475 \\ + 3687 \\ \hline \hline \end{array}$ |
| 4. $\begin{array}{r} 6346 \\ + 282 \\ \hline \hline \end{array}$  | 5. $\begin{array}{r} 3436 \\ + 208 \\ \hline \hline \end{array}$  | 6. $\begin{array}{r} 5785 \\ + 3512 \\ \hline \hline \end{array}$ |
| 7. $\begin{array}{r} 7213 + 2587 \\ \hline \hline \end{array}$    | 8. $\begin{array}{r} 1111 + 1199 \\ \hline \hline \end{array}$    | 9. $\begin{array}{r} 5789 + 3122 \\ \hline \hline \end{array}$    |
| 10. $\begin{array}{r} 4747 + 4363 \\ \hline \hline \end{array}$   | 11. $\begin{array}{r} 689 + 4678 \\ \hline \hline \end{array}$    | 12. $\begin{array}{r} 7172 + 938 \\ \hline \hline \end{array}$    |

## Mathematics - 4

## The subtraction of 4 digit number:-

Example : Subtract 6853 from 8327

$$\begin{array}{r}
 \text{T. H. T. O} \\
 \begin{array}{r}
 \overset{7}{\cancel{8}} \overset{12}{\cancel{3}} \overset{12}{\cancel{2}} 7 \\
 - 6 \quad 8 \quad 5 \quad 3 \\
 \hline
 1 \quad 4 \quad 7 \quad 4
 \end{array}
 \end{array}$$

Solve these-

$$\begin{array}{r}
 1. \quad \begin{array}{r} 5 \quad 0 \quad 7 \quad 8 \\ - 2 \quad 7 \quad 8 \quad 4 \\ \hline \end{array}
 \end{array}$$

$$\begin{array}{r}
 2. \quad \begin{array}{r} 7 \quad 9 \quad 8 \quad 1 \\ - 2 \quad 5 \quad 0 \quad 3 \\ \hline \end{array}
 \end{array}$$

$$\begin{array}{r}
 3. \quad \begin{array}{r} 5 \quad 6 \quad 7 \quad 2 \\ - 3 \quad 2 \quad 4 \quad 0 \\ \hline \end{array}
 \end{array}$$

$$\begin{array}{r}
 4. \quad \begin{array}{r} 3 \quad 5 \quad 6 \quad 3 \\ - 2 \quad 7 \quad 0 \quad 6 \\ \hline \end{array}
 \end{array}$$

$$\begin{array}{r}
 5. \quad \begin{array}{r} 6 \quad 2 \quad 3 \quad 0 \\ - 2 \quad 4 \quad 5 \quad 1 \\ \hline \end{array}
 \end{array}$$

$$\begin{array}{r}
 6. \quad \begin{array}{r} 2 \quad 5 \quad 0 \quad 8 \\ - 1 \quad 3 \quad 9 \quad 2 \\ \hline \end{array}
 \end{array}$$

$$7. \quad 5643 - 2154$$

$$8. \quad 9634 - 5071$$

$$9. \quad 5000 - 2550$$

$$10. \quad 7111 - 5222$$

$$11. \quad 4444 - 2165$$

$$12. \quad 8100 - 7899$$

The population of 3 villages are in written below :

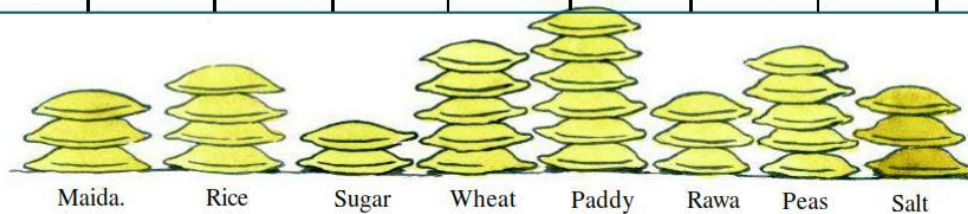
	Ladies	Men	Boys	Girls
<b>Bhanupratappur</b>	4134	3975	1152	987
<b>Basna</b>	3412	3116	1017	1075
<b>Abhanpur</b>	3532	3580	875	915

See this table and answer the questions :-

- How many people live in Bhanupratappur ?
- In Basna how many men are less than women ?
- How many boys live in Bhanupratappur and Basna ?
- What is the total number of boys and girls in Abhanpur ?

See the picture and tell :

Edible things	Wheat	Rice	Maida	Sugar	Salt	Rawa	Peas	Paddy
In a Bag	75 kg	50 kg	50 kg	50 kg	40 kg	40 kg	75 kg	75 kg



Maida.

Rice

Sugar

Wheat

Paddy

Rawa

Peas

Salt

## ADDITION &amp; SUBTRACTION

- What is the total weight of Rawa ?
- What is the total quantity of 4 sacks of rice and 3 sacks of salt?
- How much is the weight of the sacks of Rawa less than the weight of the sacks of maida ?
- Among given edible things, which are equal in weight?
- What is the total weight of 1 sack of maida and 2 sacks of rice?
- Among the above edible things given which has the maximum and minimum weight ?
- The total number of sacks of all the edible things.


See the picture and say who has spent how much money to purchase things at the following price :



- |   |           |
|---|-----------|
| Harpal purchased cycle and T.V.                       | (       ) |
| Dinesh purchased bat ball, radio and mobile.          | (       ) |
| Raju purchased bucket and mug, almirah and telephone. | (       ) |
| Salma purchased hockey stick, radio and mobile.       | (       ) |
| Reeti purchased bucket, mug, radio and almirah.       | (       ) |
- If every person has Rs. 9,500 then what amount of money would be left with each?



## Mathematics - 4

Now tell -

1. Who has spent more: Harpal or Dinesh ?
2. Who has spent more: Dinesh or Reeti ? By how much ?
3. What is the total amount spent by Raju and Salma both?
4. How much less was spent by Salma than Harpal ?

Now you ask your friends about their favourite things and find out their cost.

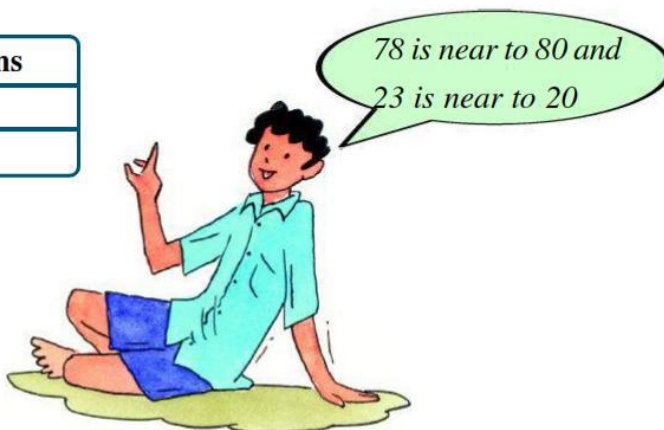
**Calculation based on Addition:**

**Example 1:** There are 78 marbles in a bag and 23 in another bag. If you add marbles from both the bags, then calculate the total number of marbles. Before calculating  $78 + 23$  first, find the nearest tens value of 78 and 23 and add them.

Number	Nearest Tens
78	80
23	20

$$\begin{array}{r}
 \text{Calculated Total} \quad 80 \\
 + 20 \\
 \hline
 100
 \end{array}$$

$$\begin{array}{r}
 \text{Actual Total} \quad 78 \\
 + 23 \\
 \hline
 101
 \end{array}$$



Thus on adding marbles of both the bags. We get about hundred marbles. Therefore the difference between the calculated number (100) and actual number (101) is only 1.

**Example 2:** In primary school, 172 boys and 121 girls are registered. Calculate the total number of students in the school?

Before calculation, find out the nearest value of 172 and 121 and add them:

First find the nearest thousand value of Rs. 3725 and Rs. 1650.

Number	Nearest Hundred
172	200
121	100

## ADDITION &amp; SUBTRACTION

$$\begin{array}{r}
 \text{Calculated Total} - \quad 200 \\
 + \quad 100 \\
 \hline
 300
 \end{array}$$

$$\begin{array}{r}
 \text{Actual Total} - \quad 172 \\
 + \quad 121 \\
 \hline
 293
 \end{array}$$

Thus the calculated total of the students is 300 which is very near the actual total 293.

**Example 3:** Raju went to market to purchase a portable T.V. and fan. Their cost are Rs. 3725 and Rs. 1650. Now you tell, nearly how much amount of money should Raju carry?

First find the nearest thousand value of Rs. 3725 and Rs. 1650.

Number	Nearest Thousand
3725	4000
1650	2000

$$\begin{array}{r}
 \text{Calculated Total} \quad 4000 \\
 + \quad 2000 \\
 \hline
 6000
 \end{array}$$

$$\begin{array}{r}
 \text{Actual Total} \quad 3725 \\
 + \quad 1650 \\
 \hline
 5375
 \end{array}$$



Therefore Raju should carry Rs. 6000 to market for both the market.

**Now tell the calculated and the actual total**

- Hint—
- If the number is of two digits then of nearest Tens.
  - If the number is of three digits then of nearest Hundred.
  - If the number is of four digits then of nearest Thousand.

- |               |               |               |                |
|---------------|---------------|---------------|----------------|
| 1. 47, 81     | 2. 67, 32     | 3. 97, 15     | 4. 72, 138     |
| 5. 8251, 1310 | 6. 5371, 3800 | 7. 7214, 1818 | 8. 632, 225    |
| 9. 5990, 4137 | 10. 265, 381  | 11. 703, 581  | 12. 6410, 3817 |

## Mathematics - 4

**Methods of Vedic Maths**

You have already learnt addition, subtraction, multiplication and division. There are a few simple and interesting methods for this processes in Vedic Maths also. Here we will introduce them to you. Before knowing about these methods let us get acquainted with digits.

**Digits (Ank)-** 0,1,2,3,4,5,6,7,8,9. These are the ten digits. All the numbers are written using these digits.

**Bijank-** In Vedic Maths digits from 1 to 9 are called Bijank. To find out the Bijank of any number, the digit of the number are added till a single digit number is obtained.

**For example –**

To find out the Bijank of 35, we will add its digits.

$$3 + 5 = 8$$

So the Bijank of 35 is 8

Similarly -

Bijank of 97

$9 + 7 = 16$  but 16 has 2 digits So we will add these digits also

$$1 + 6 = 7$$

So the Bijank of 97 is 7

**Param Mitra Ank –**

Any 2 digits whose total is 10 are called Param Mitra of each other.

For example –

$$1 + 9 = 10$$

So 1 is Param Mitra of 9

and 9 is Param Mitra of 1

Now let's practice it a bit

**Exercise**

Q. 1 - What are the digits that are used for writing numbers?

Q. 2 - Write the Bijank of following numbers.

- |         |          |           |         |         |
|---------|----------|-----------|---------|---------|
| (i) 12  | (ii) 15  | (iii) 17  | (iv) 19 | (v) 37  |
| (vi) 44 | (vii) 56 | (viii) 67 | (ix) 96 | (x) 183 |

Q. 3 - Write the Param Mitra number of the following numbers.

- |       |        |         |        |
|-------|--------|---------|--------|
| (i) 2 | (ii) 3 | (iii) 4 | (iv) 5 |
|-------|--------|---------|--------|



## ADDITION &amp; SUBTRACTION

**Ekadhiken Poorven–**

The meaning of Ekadhiken Poorven is take one more than the previous number.

For example -3 is the ekadhik of 2

Similarly - 4 is the ekadhik of 3

Can you tell the ekadhik of each digit from 1 to 9 ?

**Eknyunen Poorven –**

The meaning of EkNyunenPoorven is take one less than the previous number.

For example - 7 is eknyun of 8, Similarly 4 is eknyun of 5

Now you tell the eknyun of all the digit from 1 to 9.

In the methods of Vedic Maths, Ekadhiken Poorven and Eknyunen Poorven are used at many places.

**Now tell –**

What numbers will you get from the following numbers by doing its Ekadhik twice?

- (i) 22      (ii) 43      (iii) 30      (iv) 58

Sometimes it is necessary to do Ekadhik or Eknyun more than once.

**For example –**

We get 13 by doing Ekadhik of 12 and 14 when we again do Ekadhik of 13 that is get 14 when we do Ekadhik of 12 twice.

Now lets do Eknyunen of 12 twice.

We get 11 by doing Eknyun and 10 when we again do Eknyun of 11 we get 10 that is when we do Eknyunen of 12 twice.

What numbers we will get when we do Ekadhik of these numbers thrice?

- (i) 23      (ii) 15      (iii) 36      (iv) 42

Choose some numbers on your own and practice Ekadhik of these numbers.

**Now tell –**

What numbers will you get by doing EkNyunen twice?

- (i) 16      (ii) 30      (iii) 67      (iv) 75

What numbers will you get from these numbers by doing EkNyunen thrice?

Choose some numbers on your own and practice doing Eknyun twice or thrice.

## Mathematics - 4

**Addition with the help of Param Mitra.**

If we have to add 1, 2 or 3 to any digit, we can do it by doing Ekadhik as per need. But if both the digits are greater than 5, it is easy to add with the help of Param Mitra.

Lets, look at an example.

$$\begin{array}{r} 9 \\ + 7 \\ \hline \end{array}$$

Here we have to add 9 and 7. Param Mitra Ank of 9 is 1.

So we taken 1 from 7 and add it to 9.

Now  $9 + 1 = 10$

And taking out 1 from 7 makes it 6. By adding 6 to 10, we get 16

i.e.

$$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$$

Similarly practice addition with the help of Param Mitra.

(i)  $7 + 8$

(ii)  $8 + 6$

(iii)  $9 + 8$

(iv)  $6 + 9$

In a similar way, take two digits greater than 5 and try adding them with the help of Param Mitra.



## Unit 3

# Multiplication and division

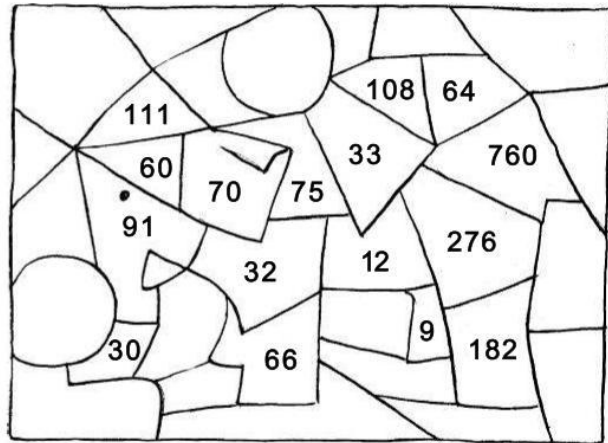
You have already done multiplication and division in previous classes-

Some similar questions (sums) are given below –

Answers of the questions are given in adjacent boxes.

Solve the questions. Colour the boxes which have the answers. When all the boxes will be coloured, you will get a figure.

1.  $46 \times 6 =$  .....
2.  $7 \times 13 =$  .....
3.  $66 \div 2 =$  .....
4.  $11 \times 6 =$  .....
5.  $37 \times 3 =$  .....
6.  $150 \div 5 =$  .....
7.  $128 \div 4 =$  .....
8.  $95 \times 8 =$  .....
9.  $15 \times 5 =$  .....
10.  $120 \div 2 =$  .....
11.  $26 \times 7 =$  .....
12.  $27 \times 4 =$  .....



13. A box contains 7 balls. How many boxes are needed for 63 balls?
14. Cost of 1 kg sugar is Rs 14/- Rajiv bought 5 kg of sugar. How much money should he pay to the shopkeeper?.
15. There are 16 guava trees, 16 orange trees, 16 papaya trees and 16 mango trees in a fruit garden (orchard). What is the total number of trees in the fruit garden(orchard)?
16. There are 72 oranges. Distribute them among 6 persons. How many oranges will each person get?

You have already learnt in previous classes that multiplication means add again and again:

1 Box contain 18 chalksticks. How many chalksticks will be there in such 3 boxes?

$$18 + 18 + 18 = 54 \text{ i.e. } 18 \times 3 = 54$$

You already know  $6 \times 5 = 5 \times 6$

Find out the product of two numbers. You will see if you change the position of the number, the product will be same i.e.  $3 \times 4 = 4 \times 3$

Tell everyone if you find any two numbers for which this is not true.



## Mathematics - 4

Now solve the following problems quickly:-

1.  $8 \times 8 = 64$
2.  $12 \times 9 = 108$
3.  $19 \times 10 = 190$
4.  $20 \times 5 = 100$
5.  $29 \times 4 = 116$
6.  $26 \times 8 = 208$



- $$8 \times 9 = \dots\dots\dots$$
- $$9 \times 12 = \dots\dots\dots$$
- $$20 \times 10 = \dots\dots\dots$$
- $$20 \times 4 = \dots\dots\dots$$
- $$30 \times 4 = \dots\dots\dots$$
- $$26 \times 7 = \dots\dots\dots$$

Find the missing number:



## Different methods of multiplication

There are 23 chairs in a row. How many chairs will be there in 9 such rows? Meena and Tinu solved this in different ways.

In how many more ways can you solve this problem?

$$23 \times 10 = 230$$

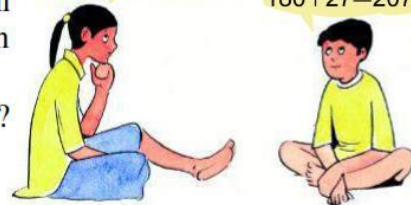
$$\text{Now } 230 - 23 = 207$$

$$(20+3) \times 9$$

$$20 \times 9 = 180$$

$$3 \times 9 = 27$$

$$180 + 27 = 207$$



## Some more problem sums

1. In a garden there are 7 rows. In each row 15 rose plants are planted. How many total rose plants are there?
2. There are 25 oranges in a basket. How many oranges will come in such 5 baskets?
3. A tailor stitches 12 shirts in one day. How many shirts does he stitch in 4 days?

You should try some more such problems and solve it in different ways. Try at least 4-5 processes for each problem.

## How to solve?

In previous class you did sums like  $34 \times 7$ ,  $126 \times 2$

Now we will see  $32 \times 16$

$$\begin{array}{r} 1 \\ 32 \\ \times 16 \\ \hline 192 \quad (32 \times 6) \\ 320 \quad (32 \times 10) \\ \hline 512 \end{array}$$

Whenever you multiply a number with some two digits number, first you multiply ones number.

In this number ones digit is 6 therefore  $32 \times 6 = 192$

Now the second digit, 1 tens i.e. 10 is multiplied by 32

$32 \times 10 = 320$  | Now you add both  $(192+320)$ . The answer will be 512.

## MULTIPLICATION AND DIVISION

There is one more process for multiplication  
We can write it  $32 = 30 + 2$  &  $16 = 10 + 6$

×	30	2
10	$30 \times 10$ 300	$2 \times 10$ 20
6	$30 \times 6$ 180	$2 \times 6$ 12

Now add all the four numbers.

$$300 + 180 + 20 + 12 = \text{-----}$$

Is the answer the same as it was in previous process?

Now solve the sums given below in both the processes -

1.  $45 \times 23$

2.  $95 \times 89$

3.  $67 \times 72$

4.  $57 \times 69$

5.  $30 \times 29$

6.  $15 \times 49$

Observe and understand:

$$\begin{array}{r} 346 \\ \times 25 \\ \hline 1730 \quad (346 \times 5) \\ + 6920 \quad (346 \times 20) \\ \hline 8650 \end{array}$$

$346 \times 25 = ?$  other process to solve it.

$$346 = 300 + 40 + 6 \text{ \& } 25 = 20 + 5$$

×	300	40	6
20	$300 \times 20$ 6000	$40 \times 20$ 800	$6 \times 20$ 120
5	$300 \times 5$ 1500	$40 \times 5$ 200	$6 \times 5$ 30

Thus  $346 \times 25 = 6000 + 1500 + 800 + 200 + 120 + 30$

$$\text{Or } 346 \times 25 = 8650$$

Solve these:

1.  $132 \times 95$

2.  $465 \times 38$

3.  $278 \times 47$

4.  $921 \times 66$

5.  $760 \times 19$

6.  $803 \times 45$

Problem Sums:

- There are 65 students in a school. All deposited Rs 15 for picnic. What is the total amount deposited?
- Radha is in need of 14 copies. If each copy costs Rs 16. How much money does Radha require?
- In a small box 12 ice cream cups can be kept. In a big box 15 times more icecream cups can be kept. Answer how many icecreams can be kept in big box?
- A saree has 25 different designs. Every design has 16 colours. A shopkeeper wants to purchase one piece of each type of saree for his shop. How many sarees the

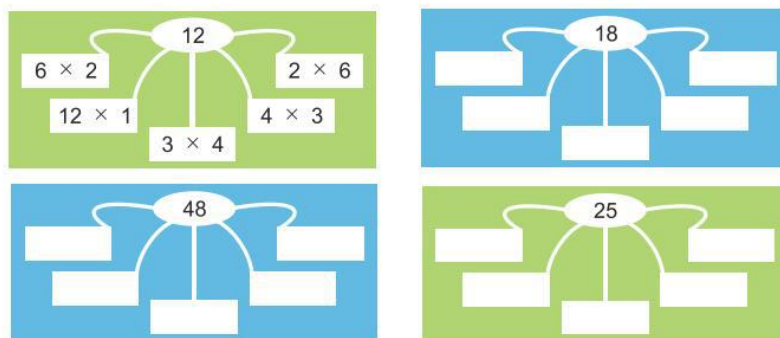


## Mathematics - 4

shopkeeper has to purchase for shop?

- One chair costs Rs. 436. What will be the cost of 35 chairs?
- Ramesh went to the market with Rs. 3000. He purchased 12 sets of books at the rate of Rs 175. How much money is left with him?

## Form question from the given answer



## Game of tables (Tables game)

If you know the tables from one to ten then you can form tables beyond ten:

Let us develop table of 13:-

Table of 10	10	20	30	40	50	60	70	80	90	100
Table of 3	3	6	9	12	15	18	21	24	27	30
Table of 13	13	26	39	52	65	78	91	104	117	130

To form table of 13 first we wrote table of 10 and then table of 3. then added them and we get the table of 13,  $7+6=13$  what will happen if we add tables of 7 and 6 ?

Let us do and observe -

Table of 7	7	14	21	28	35	42	49	56	63	70
Table of 6	6	12	18	24	30	36	42	48	54	60
Table of 13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....

Do you get the table of 13? Can you develop the table of 13 by using other numbers?

Which are those numbers?

1. ...., .....      2. ...., .....      3. ...., .....      4. ...., .....

You have already formed table of 13 In the same way develop tables of 11, 12, 14, .....20.



## MULTIPLICATION AND DIVISION

**DIVISION**

When we have to distribute the things equally we divide it. You have learnt in class 3 that we do division by subtracting the same number again and again or by telling the tables.

Ex. 15 apples are distributed equally among 5 children. Tell how many will each child get?

$$\begin{array}{r} 3 \\ 5 \overline{)15} \\ \underline{15} \end{array}$$



$$\begin{array}{r} 1+1+1 \\ 5 \overline{)15} \\ \underline{-5} \\ 10 \\ \underline{-5} \\ 5 \\ \underline{-5} \\ 0 \end{array}$$

In this way you have seen that by both the processes of division 5 children got 3 apples.

**Solve:**

1.  $51 \div 3 = 17$

2.  $40 \div 4 = \text{-----}$

3.  $150 \div 5 = \text{-----}$

4.  $63 \div 7 = \text{-----}$

5. How many times can 5 be subtracted from 45?

6. If 108 things are distributed in 9 groups then how many groups will be formed?

7. In a jeep only 8 people can sit. Then how many times will the jeep be required to take 48 people to the market.

8. One gardener has 60 flowers. If he makes a garland of 12 flowers then how many garlands would be made?

9. One box can contain 10 books. Then how many boxes would be required to keep 100 books.

$$\begin{array}{r} 17 \\ 3 \overline{)51} \\ \underline{-3} \\ 21 \\ \underline{-21} \\ 0 \end{array}$$

**Remainder**

Can 13 sweets be divided equally among 4 children.



$$\begin{array}{r} 3 \\ 4 \overline{)13} \\ \underline{12} \\ 1 \end{array}$$

You know:

Here 4 divisor  
13 dividend  
and 3 quotient

This means that when 13 sweets were distributed equally among 4 children then each child got 3 sweets and one sweet was left. Here remainder = 1.

## Mathematics - 4

## Remainder = 1

Now solve the questions given below.

- |                        |                        |                        |
|------------------------|------------------------|------------------------|
| 1. $25 \div 4$         | 2. $39 \div 6$         | 3. $53 \div 8$         |
| 4. $7 \overline{)529}$ | 5. $9 \overline{)353}$ | 6. $3 \overline{)654}$ |
| 7. $84 \div 4$         | 8. $49 \div 7$         | 9. $97 \div 6$         |

Write the divisor, dividend, quotient and remainder separately. Write the questions, which have a remainder of '0' in your copy and make a problem sum of these question. Two problem sums are given here –

- $25 \div 4$   
The teacher took out 25 books and distributed them equally among 4 children. Tell how many books each child would get and how many books would be left.
- $3 \overline{)654}$   
The cost of 3 chairs is Rs 654. Then what is the cost of one chair?

## Make questions and solve

$$484 \div 4$$

The cost of 4 sarees .....

.....

## Different ways of division

The teacher gave questions of division to the students and asked them to solve it in their copies. Look at the ways in which the students solved the questions.

$\begin{array}{r} 71 \\ 4 \overline{)284} \\ - 28 \\ \hline 04 \\ - 4 \\ \hline 0 \end{array}$	$\begin{array}{r} 70+1 \\ 4 \overline{)284} \\ - 280 \\ \hline 04 \\ - 4 \\ \hline 0 \end{array}$	$\begin{array}{r} 40+30+1 \\ 4 \overline{)284} \\ - 160 \\ \hline 124 \\ - 120 \\ \hline 04 \\ - 4 \\ \hline 0 \end{array}$
$284 = 200+80+4, \quad 284 \div 4 = \begin{cases} 200 \div 4 = 50 \\ 80 \div 4 = 20 \\ 4 \div 4 = 1 \end{cases}$ <div style="text-align: right; margin-right: 50px;"> <math display="block">\begin{array}{r} 50 \\ 20 \\ 1 \\ \hline 71 \end{array}</math> </div>		

## MULTIPLICATION AND DIVISION

Are all the solutions correct? Discuss. Solve the questions of division in different way and tell which one you like and why?

Naseem and Sushila were talking. Sushila asked her to tell quickly what would be the answer on dividing 1018 by 11? Naseem told that the answer would be approximately 100.

How can we guess the answers of these questions?

Lets observe:

Naseem said 1018 is near to 1000 and 11 is near to 10.

Therefore we can divide 1000 by 10,  $(1000 \div 10)$   
and the answer would be near to 100.

Now guess the answers of the followings questions and ask others.

1. What would be the answer on dividing 97 by 31?
2. What would be the answer on dividing 932 by 9?
3. How many heaps of 8 guavas can be made from 118 guavas?

## How to solve

You have already done division in previous classes. Can you tell  $372 \div 12 = ?$

$$\begin{array}{r} 31 \\ 12 \overline{) 372} \\ \underline{-36} \quad (12 \times 3 = 36) \\ 12 \\ \underline{12} \quad (12 \times 1) \\ 00 \end{array}$$

Here 372 is to be divided by 12. You can not distribute 3 hundreds into 12 parts. So convert 3 hundreds into tens. In this way 30 tens + 7 Tens makes 37 tens.

What will be the divisor of 37 by 12 Let us read the table of 12

$$12 \times 1 = 12$$

$$12 \times 2 = 24$$

$$12 \times 3 = 36$$

$$12 \times 4 = 48$$

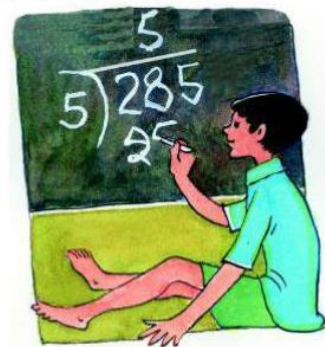
48, is greater than 37. So we read table of 12 only three times and subtrat 36 from 37. 1 tens will be remainder which we convert into ones. In this way  $10 + 2 = 12$  Ones

Now dividing 12 by 12 is equal to 1.

This can also be done in this way:

$$\begin{array}{r} 20 + 5 + 6 \\ 12 \overline{) 300 + 72} \\ \underline{-240} \quad (12 \times 20) \\ 60 \\ \underline{-60} \quad (12 \times 5) \\ 00 \quad 72 \\ \underline{-72} \quad (12 \times 6) \\ 00 \end{array}$$

$$20 + 5 + 6 = 31$$





## Mathematics - 4

Now solve these questions:

1. One rope is 132 m long. If we cut the rope into pieces of 12 meter each. How many pieces can be cut?
2. One box contains 17 bottles then how many bottles will be there in 12 boxes?
3. There are 252 apples in a basket. How many apples each person will get if these apples are distributed among 18 people?
4. A bag contains 55 numbers of 1 Rupee coins. How many heaps can be made by these coins if each heap has five rupees.
5. If one has to pay Rs. 1650 for 3 fans. What is the cost of one fan?
6. 12 students of class IV got Rs. 900 as scholarship. Tell how much rupees each student got?

You also form these type of questions. Solve it and show it to your friends and teachers.

There are some numbers and signs kept in boxes given below. Ravi has arranged them properly. But Kamla has disturbed them. Can you re-arrange them?

=	10	÷	2	5
45	÷	3	=	15
3	×	12	4	=
3	3	9	÷	=
20	÷	5	=	4



State which solutions are right and which solution are wrong. Find the mistake and correct the wrong solution.

1. 
$$\begin{array}{r} 10 \\ 7 \overline{)81} \\ \underline{-7} \\ 1 \end{array}$$

2. 
$$\begin{array}{r} 33 \\ 3 \overline{)99} \\ \underline{9} \\ 09 \\ \underline{-9} \\ 0 \end{array}$$

3. 
$$\begin{array}{r} 114 \\ 4 \overline{)96} \\ \underline{-4} \\ 5 \\ \underline{-5} \\ 16 \\ \underline{-16} \\ 00 \end{array}$$

## MULTIPLICATION AND DIVISION

$$\begin{array}{r}
 4. \quad \begin{array}{r} 1 \\ 6 \overline{) 90} \\ \underline{-6} \\ 3 \end{array}
 \end{array}$$

$$\begin{array}{r}
 5. \quad \begin{array}{r} 07 \\ 8 \overline{) 56} \\ \underline{0} \\ 56 \end{array}
 \end{array}$$

$$\begin{array}{r}
 7. \quad \begin{array}{r} 12 \\ 4 \overline{) 58} \\ \underline{-4} \\ 8 \\ \underline{-8} \\ 0 \end{array}
 \end{array}$$

**You have already done problem sums. Now you form problem sums from the facts given below.**

$$1. \quad 125 \div 5$$

$$2. \quad 53 \times 4$$

$$3. \quad 15 + 15 + 15$$

$$4. \quad 763 - 365$$

$$5. \quad 256 \div 12$$

$$6. \quad 105 \div 15$$

$$7. \quad 108 \times 13$$

$$8. \quad 256 + 200 + 300$$

$$9. \quad 63 \times 9$$

You also make such type of sums. Do it yourself and also ask your friends to do it.



## Unit 4

# FRACTION

You have read about  $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{1}{3}$  in class III. Do you remember we said  $\frac{1}{2}$  as half and exhibited in figure in this way –

$$\frac{1}{2} = \text{half} =$$



(Colour part)

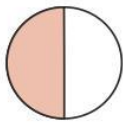
Fill up the blanks with similar figures

$$\frac{1}{4} = \text{one fourth} =$$

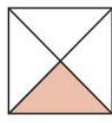
$$\frac{3}{4} = \text{-----} =$$

$$\frac{1}{3} = \text{-----} =$$

Shahnaz and Mala have prepared some diagrams and figures. What is the value of this coloured part. Write the names below the figures.



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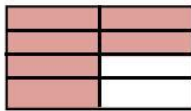
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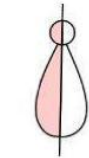
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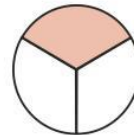
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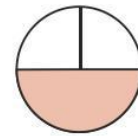
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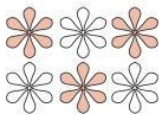
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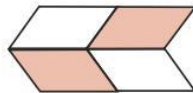
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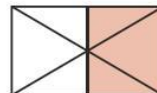
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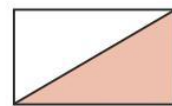
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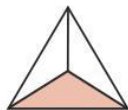
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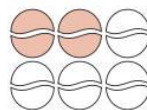
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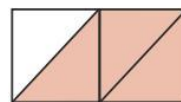
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## Numerator and denominator

You must know that in  $\frac{2}{8}$ , 2 is numerator and 8 is denominator.

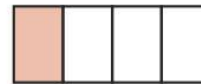
Now tell which number is numerator  $\frac{3}{4}, \frac{2}{3}, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}$

Numerator .....

Denominator .....

Now do the fractions in figures also. If some fraction is exhibited by figure how can you recognize numerator and denominator. Let see the examples .

**Example-** We can exhibit  $\frac{1}{4}$



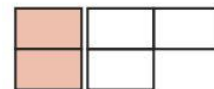
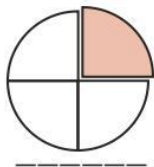
Coloured portion = 1 (numerator)

Uncoloured and coloured portion (total) = 4 means denominator.

In this way do  $\frac{2}{3}, \frac{1}{2}, \frac{1}{3}$  and  $\frac{3}{4}$

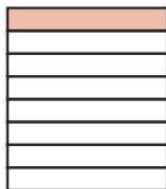
The total number of divisions of a thing is its denominator and the coloured divisions are numerators

See these figures and tell what is the total number of parts and the number of coloured parts. Then tell the numerator and the denominator.



## Write in Fraction:

Here we have distributed a piece of paper into 8 equal parts.



One part is coloured.

Coloured part of paper = 1

Total number of parts of the paper = 8

Therefore the coloured part is  $\frac{1}{8}$  (1 upon 8) of the whole piece of paper.

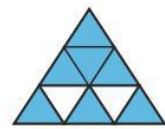
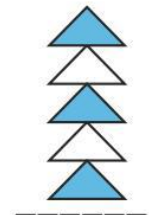
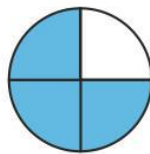
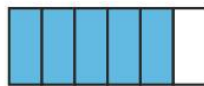
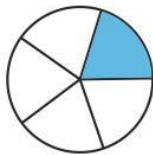


## Mathematics - 4

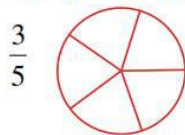
In the same way if 2 parts of the paper are coloured then the coloured part is  $\frac{2}{8}$  (2 upon 8) of the whole piece of paper. Here numerator is 2 and denominator is 8.

- To tell  $\frac{3}{8}$  how many parts will you colour? \_\_\_\_\_
- If we colour 4 parts then what part will be the coloured part of whole piece of paper? \_\_\_\_\_
- If we colour 7 parts of whole piece of paper then coloured part of whole piece of paper? \_\_\_\_\_
- 5 parts of whole piece of paper? \_\_\_\_\_
- If all parts of whole piece of paper is coloured, then write in fraction. \_\_\_\_\_

**Write the coloured parts as fraction in the figure given below –**



**Some fractions are given below. Exhibit them in the figure :**



**Write as directed:**

1. A fraction in which denominator is 8 & numerator is 5 \_\_\_\_\_
2. A fraction in which denominator is 5 and numerator is 13 \_\_\_\_\_
3. Three fractions in which denominator is double of numerator \_\_\_\_\_
4. Two fractions of equal denominators \_\_\_\_\_
5. Two fractions in which numerators are same but denominators are different. \_\_\_\_\_

**Division is also fraction**

Do you know that collection of things can be divided into equal parts. You may have divided things equally between your two friends, this means both of them have taken the things half-half.

Sushila and Chandar collected 16 jamuns. If they distributed it equally between themselves. How many jamuns will each get.

**We can explain this as follows –**

Total number of jamuns was 16

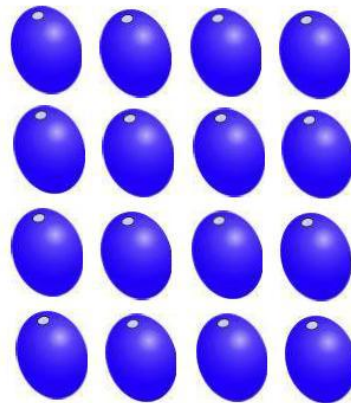
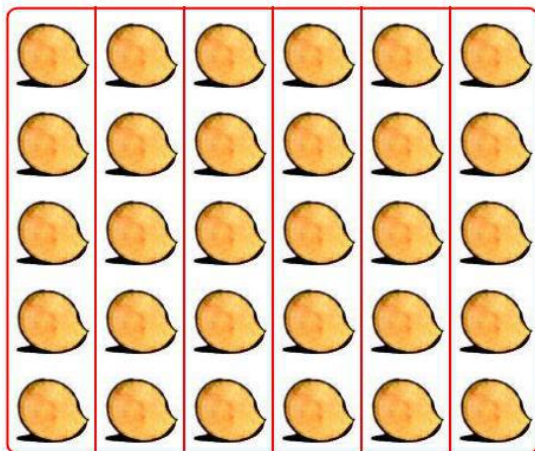
equally divided in two parts

Sushila's share is half of the total or  $\frac{1}{2}$

Chandar's share is half of the total or  $\frac{1}{2}$

Each portion have 8 jamuns

Therefore half of 16 = 8 or  $\frac{1}{2}$  of 16 = 8

**Now you do**

Total number of mangoes \_\_\_\_\_

How many equal portion of mangoes were made? \_\_\_\_\_

What part of total number is represented by each portion? \_\_\_\_\_

What is the number of mangoes in each portion? \_\_\_\_\_

There fore  $\frac{1}{6}$  of 30 = 5



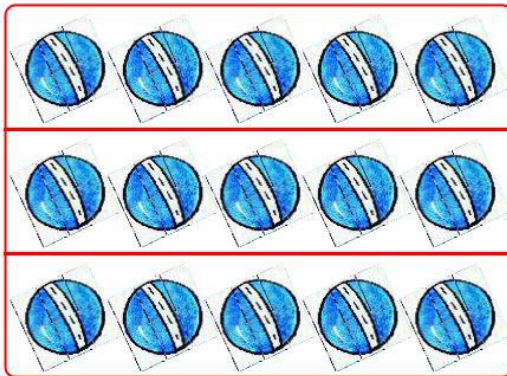
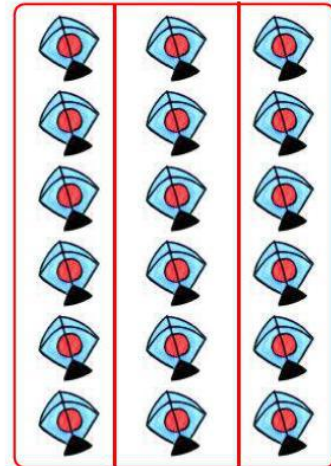
**Mathematics - 4**

Total number of kites -----

In how many equal portions it is divided -----

How will you write each portion in fraction -----

Number of kites in each portion -----

Therefore  $\frac{1}{3}$  of 18 = -----

Total number of balls -----

In how many equal parts it has been divided -----

How will you write one part in fraction? -----

How will you write two parts in fraction? -----

State the number of balls in two parts -----

Therefore  $\frac{2}{3}$  of 15 = -----**Now do it** (Draw the figure first, if needed)

- There were 16 bananas out of which I ate 4. Tell what fraction of bananas are left?
- In a basket there are 6 mangoes, 4 bananas and 5 apples. What is the fraction of the apples among the entire fruits?
- Kailash has 10 biscuits. Out of which he gave 2 biscuits to Shubha. Tell what fraction did Shubha get ?

**Big & Small Fraction**

In your previous class you read about half ( $\frac{1}{2}$ ), quarter ( $\frac{1}{4}$ ), three fourth ( $\frac{3}{4}$ ) and one third ( $\frac{1}{3}$ ). These words are also used in other examples.

Where do you use these words in daily life?

-----

## Fraction

If you got  $\frac{1}{2}$  of a guava and your friend got  $\frac{1}{4}$  th, who got more?

Which is a greater fraction:  $\frac{1}{2}$  or  $\frac{1}{4}$ ?

You got it right :  $\frac{1}{2}$  is greater than  $\frac{1}{4}$

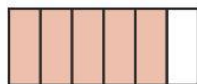
Let us find which is the greatest fraction among  $\frac{1}{6}$ ,  $\frac{2}{6}$  and  $\frac{5}{6}$  ?



See these figures -



Here coloured portion is  $\frac{1}{6}$  of the whole. Here uncoloured portion is ..... of the whole.

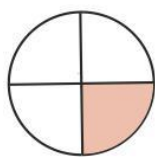


Here coloured portion is ..... of the whole.

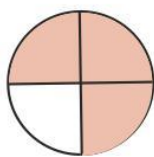
Among all of these, which figure has maximum coloured part? Which fraction exhibits the maximum coloured part? -----

This fraction is the greatest fraction among all three.

Now see the figures and fill which fraction is greater and which fraction is smaller ?



$$\frac{1}{4}$$

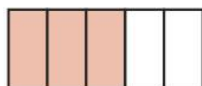


$$\frac{3}{4}$$

Between these two fraction  $\frac{1}{8}$  is

smaller than  $\frac{3}{4}$

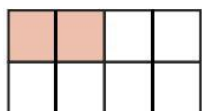
It can be shown as  $\frac{1}{4} < \frac{3}{4}$



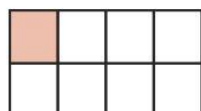
$$\frac{3}{5}$$



$$\frac{2}{5}$$

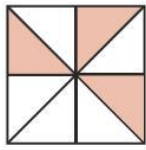


$$\frac{2}{8}$$

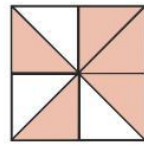


$$\frac{1}{8}$$

## Mathematics - 4

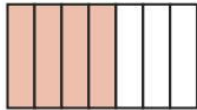


$$\frac{3}{8}$$

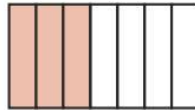


$$\frac{5}{8}$$

.....

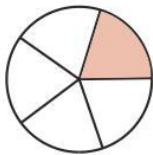


$$\frac{4}{7}$$

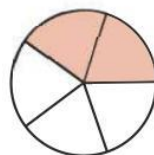


$$\frac{3}{7}$$

.....

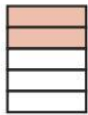


$$\frac{1}{5}$$

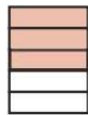


$$\frac{2}{5}$$

.....



$$\frac{2}{5}$$



$$\frac{3}{5}$$

.....

If denominator of two fractions are equal then the fraction having greater value of numerator is a greater fraction.

### Arrange the numbers in order

You have already arranged the number like 1, 2, 3, 4, and 98, 99, 100, 101, 102, ..... etc.

Now arrange the fractions in increasing order.

$$\frac{8}{9}, \frac{6}{9}, \frac{5}{9}, \frac{3}{9}, \frac{1}{9}, \frac{4}{9}, \frac{7}{9}, \frac{2}{9}$$

You can also write them by using the sign - <, >



For example—  $\frac{1}{9} < \frac{2}{9} < \text{.....}$

Or

$\frac{8}{9} > \text{.....}$

Which is the greatest and the smallest fraction among these ?

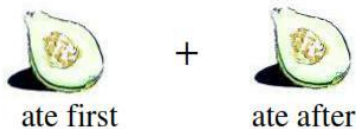


## Fraction

**Addition of Fraction**

Mother gave guava to Seema. Seema told "I want to eat half ( $\frac{1}{2}$ ) only." She ate half ( $\frac{1}{2}$ ). The guava was sweet, so she took the other half also and ate that also.

We can show the guava, which Seema ate, in this way –



It means ate both the parts (a whole Guava)

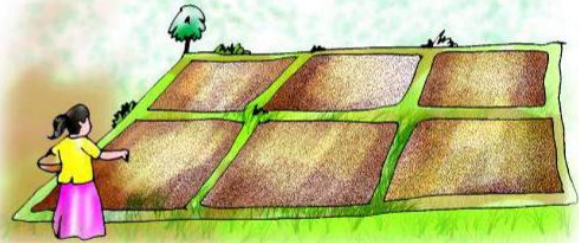
We can also write this in following way –

$$\frac{1}{2} + \frac{1}{2} \xrightarrow[\text{In all 2 portions were made}]{\text{ate both the portions}} = \frac{2}{2} = \frac{1+1}{2}$$

**Let us see one more example -**

Sakina started sowing the field. The field was big so it cannot be completed within a day. She divided the field in 6 equal portions.

She thought that she would sow one portion of the field every day. She did the same.



The sowing done in first day  $\frac{1}{6} = \frac{\text{Sowed portions}}{\text{Total portions of the field}}$

Sowing done till second day.  $\frac{1}{6} + \frac{1}{6} = \frac{1+1}{6} = \frac{2}{6}$

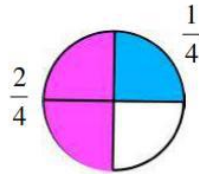
Sowing done till 5th day  $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{1+1+1+1+1}{6} = \frac{5}{6}$

And sowing done till 6th day  $\frac{1}{6} + \frac{1}{6} + \dots + \dots + \dots + \dots$   
 $= \dots = \dots$

It means sowing is done in the whole field.

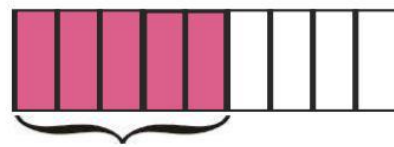
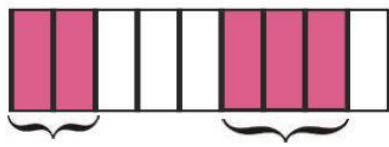
## Mathematics - 4

Now add the fraction :

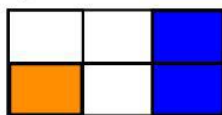


One of the two fractions is divided into four parts. If you add one fourth part to two-fourth part it becomes three fourth part.

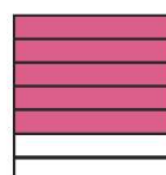
$$\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$$



$$\frac{2}{9} + \frac{3}{9} = \frac{5}{9}$$



$$\frac{1}{6} + \frac{2}{6} = \dots\dots\dots$$



$$\dots\dots\dots + \dots\dots\dots = \dots\dots\dots$$

The fraction you have just seen had equal denominators. If denominator is equal it means the portions of both the fractions are equal.

## Subtraction of Fraction :

A sugar cane seller cut the sugarcane into 10 equal parts. He gave 7 parts i.e.  $\frac{7}{10}$  part of the sugar cane to Jayant. He gave the remaining part i.e.  $\frac{3}{10}$  part of the sugar cane to Sweety. Now tell how much part is with Jayant than Sweety ?



## Fraction

$$\begin{aligned}
 \text{How much more did Jayant get} &= \text{Jayant's portion} - \text{Sweety's portion} \\
 &= \frac{7}{10} - \frac{3}{10} \\
 &= \frac{7-3}{10} \\
 &= \frac{4}{10}
 \end{aligned}$$

Jayant has  $\frac{4}{10}$  part more than sweety.

**Now see them :**



$\frac{5}{6}$   
5 shaded part  
of the circle



$\frac{5}{6} - \frac{2}{6}$   
5 shaded part of the circle  
- 2 shaded part



$\frac{5}{6} - \frac{2}{6} = \frac{5-2}{6} = \frac{3}{6}$   
Remaining 3  
Shaded part

In the same way

$$\frac{4}{5} - \frac{1}{5} = \frac{4-1}{5} = \frac{3}{5}$$

$$\frac{8}{9} - \frac{3}{9} = \frac{8-3}{9} = \frac{5}{9}$$

**Fill in the blanks given below :**

A)  $\frac{5}{8} - \frac{4}{8} = \frac{5-4}{8} = \frac{\boxed{\phantom{00}}}{8}$

B)  $\frac{7}{10} - \frac{3}{10} = \frac{7-3}{10} = \frac{4}{\boxed{\phantom{00}}}$

C)  $\frac{6}{7} - \frac{2}{7} = \frac{\boxed{\phantom{00}} - \boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$

D)  $\frac{3}{4} - \frac{1}{4} = \frac{\boxed{\phantom{00}} - \boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$

**Subtract –**

A)  $\frac{1}{3}$  from  $\frac{2}{3}$

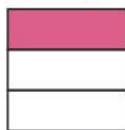
B)  $\frac{1}{8}$  from  $\frac{4}{8}$

C)  $\frac{5}{7}$  from  $\frac{6}{7}$

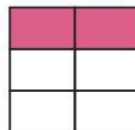
D)  $\frac{1}{10}$  from  $\frac{3}{10}$

**Fractions which are equal**

You have read about big and small fractions and did some exercises also. Here some more diagrams along with fractions are given.



$$\frac{1}{3} = \frac{\text{coloured portions}}{\text{total portions}} = \frac{2}{6}$$

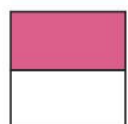




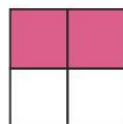
## Mathematics - 4

Colour one part of a rectangle which is divided into 3 equal parts. If you had 6 parts of the same rectangle, colour 2 parts of it. In both the conditions the coloured parts are equal.

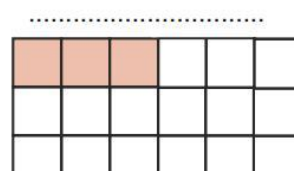
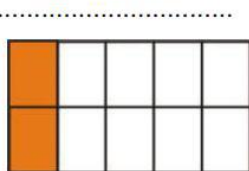
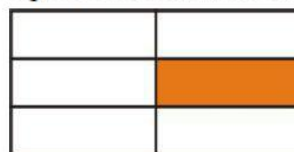
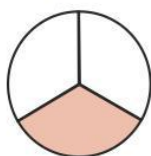
Therefore  $\frac{1}{3} = \frac{2}{6}$   
Thus



$$\frac{1}{2} = \frac{2}{4}$$

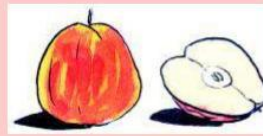
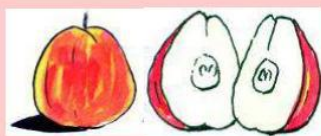


Write the fraction of the diagrams given below. Then join the equal fractions with lines.



## Fraction more than one

Suppose we have two apples. If you ate half of an apple what part is left with us ?



Only half  $\frac{1}{2}$  apple is left from the apple which you ate.

The other apple remains unused. Divide the other apple into two equal halves. Then it is equal to 2 halves of an apple.

We are left with — half of the first apple and two halves of the other apple.

**It means total three halves.**

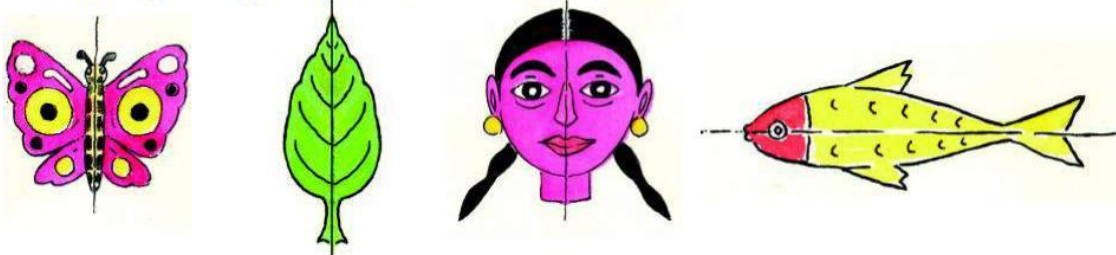
$$\begin{aligned} &= \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \\ &= \frac{1+1+1}{2} \\ &= \frac{3}{2} \end{aligned}$$

We are left with  $\frac{3}{2}$  apples.

## Unit 5

# Symmetry

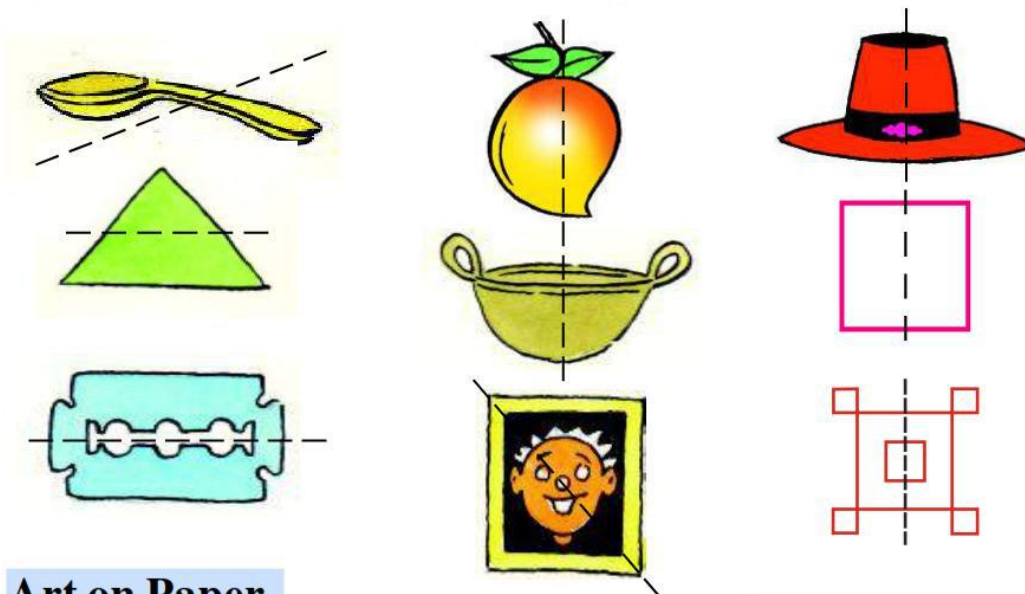
See the figures given below



In the middle of each figure one line is drawn.

Are the figures in both side of the line alike (same)? -----

There are some more figures given below. Lines are also drawn in these figure. Some figures are alike. On both sides of the line. Recognize them and colour them.



### Art on Paper

- Fold a piece of paper from the center.
- Open the paper and pour some drops of ink on it.
- Again fold the paper in the same way and press it.
- Now open the paper and you will get some figures on both the sides.

Here one figure is made for you.

Are this figure and the figure made by you both symmetrical figures?



## Mathematics - 4

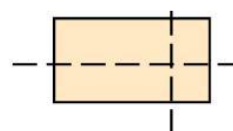
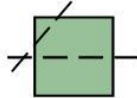
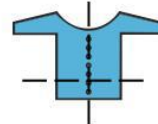
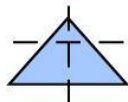
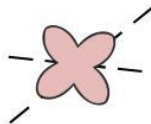
**Now do this:**

Fold a piece of paper from the middle or (centre). Take one thread and dip it in ink. Now put the thread on the centre of the paper. Now press the paper with the one hand and pull out the thread with the other hand. Open the paper and see. Is the figure same on both sides of the paper?

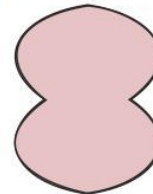
Now you see, after doing all these activities you get similar figures. So these figures are symmetrical figures. The line on which similar figures are drawn in both sides is known as symmetrical axis.

**Practice**

Identify the symmetrical axis and draw line with pencil over it.

**Do and see**

Take a piece of coloured paper and fold it from the centre cut any figure with scissors from the figures given below. Open the piece of paper and see.



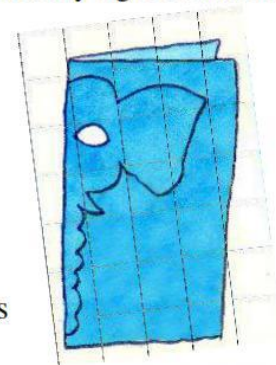
Have you ever seen any one cut paper like this ? Where?

Try the same by folding the paper several times. You will get funny figures. Which You can use this to decorate your class room or your room.

**Come let us make mask:**

1. Fold a paper from the centre.
2. Draw half figure of a face with the help of a pencil.
3. Cut the eye and ear with the help of a scissor.
4. Open the paper and the mask is ready.

In the same way you can prepare different masks in different shapes

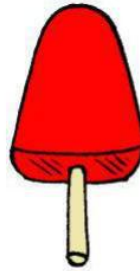




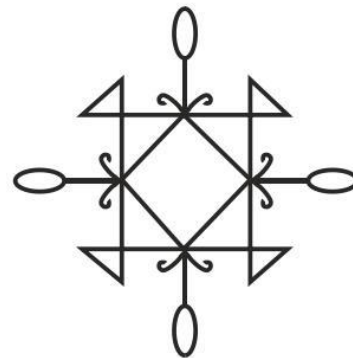
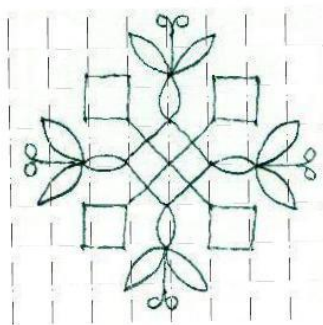
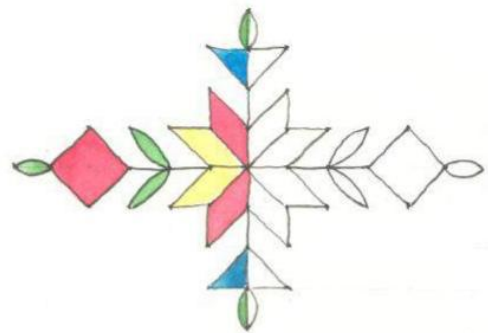
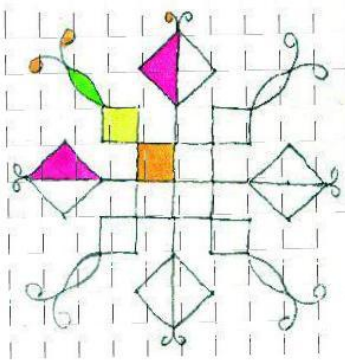
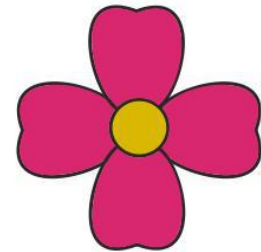
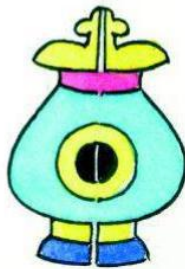
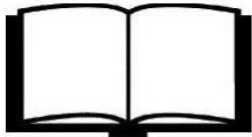
Symmetry

**Practice**

Draw symmetrical axes in the figures given below.



**Fill Colour -**



## Unit 6

# Measurement

## Length

### Let's play some game

Collect these things with the help of your friends

. cap of a small bottle . match box . a piece of tile

Now make a mark on the ground and put one of these thing on it. Now hit the item with your finger. Mark that place with a chalk where the item stops. Measure the distance between both the marks and write it in the following table.

Name of the player	First attempt	Second attempt
.....	..... cm	..... cm
.....	..... cm	..... cm
.....	..... cm	..... cm

### Lets do long jump

All the students of the class go to the field with your teacher. Draw a line on the field. Every student does long jump by turns. Measure the distance covered by each student by metre scale and show it to your teacher. The student who jumps the longest will be the winner.



Name	Make it dear
.....	.....mts.....cm
.....	.....mts.....cm
.....	.....mts.....cm

**Guess and write the length of the things written in the table:**

Items	Length (approx)	Length(after measurement)
Book	..... cm	.....
Slate	..... cm	.....
Rubber	..... cm	.....
Pencil	..... cm	.....
Rope	..... mtr .....cm	.....
Door	..... mtr .....cm	.....
Table	..... mtr .....cm	.....



Now take one metre scale or measuring tape used by tailors. Measure all the things one by one with the help of your teacher and write them in the table.

Now measure the things and see how much close is the guessed measurement to the actual measurement.

You have read in class III

$$1 \text{ metre} = 100 \text{ cm}$$

$$100 \text{ cm} = 1 \text{ metre}$$

**Let's convert (change) 4 metres into centimetre**

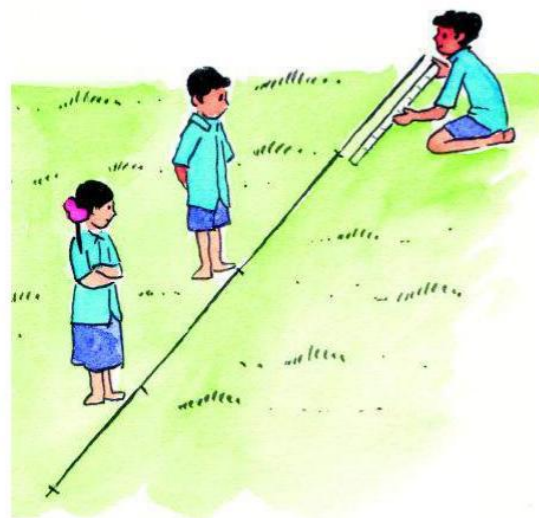
$$\begin{aligned}
 4 \text{ metre} &= 1 \text{ mtr} + 1 \text{ mtr} + 1 \text{ mtr} + 1 \text{ mtr} \\
 &= 100\text{cm} + 100 \text{ cm} + 100\text{cm} + 100 \text{ cm} \\
 &= 100 \times 4 \text{ centimetre or } 4 \times 100 \text{ centimetre} \\
 &= 400 \text{ centimetre}
 \end{aligned}$$

### What is the distance ?

Take 1 mtr of measuring tape used by tailor. Go out in the field. Insert one nail on the ground. Draw a six metre long line from here. Now mark at every 50 cm distance on the line. Make one child stand on every mark.

**Now tell :**

- Who is standing at 2 metre distance from the nail
- What is the distance between the child standing on the third and fifth position.
- Who is standing at 500 cm distance from the nail.





## Mathematics - 4

## Fill in the blanks

$$\begin{array}{llll}
 3 \text{ mtr} & = & 3 \times 100 \text{ cm} & \text{or} & 300 \text{ cm} \\
 5 \text{ mtr} & = & \dots \times \dots \text{ cm} & \text{or} & \dots \text{ cm} \\
 8 \text{ mtr} & = & \dots \times \dots \text{ cm} & \text{or} & \dots \text{ cm} \\
 9 \text{ mtr} & = & \dots \times \dots \text{ cm} & \text{or} & \dots \text{ cm} \\
 6 \text{ mtr} & = & \dots \times \dots \text{ cm} & \text{or} & \dots \text{ cm}
 \end{array}$$

Example : Rama has 5 metres and 75 centimetres long cloth. How will you convert this measurement into centimeter?

**Let us do and see:** 5 mtrs 75 centimetres

$$\begin{aligned}
 &= 5 \text{ mtr} + 75 \text{ cm} \\
 &= 5 \times 100 \text{ cm} + 75 \text{ cm} \\
 &= 500 \text{ cm} + 75 \text{ cm} \\
 &= 575 \text{ cm}
 \end{aligned}$$



There are six houses in a colony of Asna village. The length of the courtyards of these houses are given in metres and centimetres. Convert the length in centimetres and write it in your copy.

- |                 |                 |
|-----------------|-----------------|
| 1. 5 mtr 25 cm  | 2. 7 mtr 87 cm  |
| 3. 9 mtr 5 cm   | 4. 14 mtr 50 cm |
| 5. 20 mtr 95 cm | 6. 21 mtr 27 cm |

**Example:** Convert 300 cm into metre

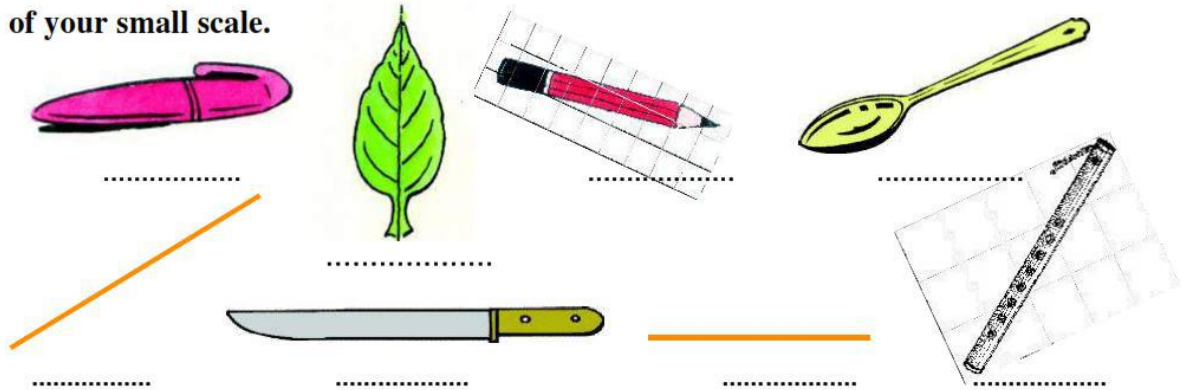
$$\begin{aligned}
 300 \text{ cm} &= 100 \text{ cm} + 100 \text{ cm} + 100 \text{ cm} \\
 &= 1 \text{ mtr} + 1 \text{ mtr} + 1 \text{ mtr} \\
 &= 3 \text{ metres}
 \end{aligned}$$

**Given below are the lengths of different ropes in centimeters. Convert them and write in metres and centimetres**

400 cm	= ..... mtr
500 cm	= ..... mtr
700 cm	= ..... mtr
340 cm	= ..... mtr .....cm
930 cm	= ..... mtr ..... cm
1125 cm	= ..... mtr ..... cm

## Measurement

Some lines and diagrams are given below. Measure their length with the help of your small scale.



## How to add:

Example:

Reeta's house is 42 mts and 35 cm far from the well. Rekha's house is 25 mtr 40 cms from Reeta's house. How far is Rekha's house from the well?



$$\begin{array}{r} 42 \text{ mtr } 35 \text{ cm} \\ + 25 \text{ mtr } 40 \text{ cm} \\ \hline 67 \text{ mtr } 75 \text{ cm} \end{array}$$

Therefore Rekha's house is 67 mts 75 cms from the well.

## Exercise

1.  $\begin{array}{r} 12 \text{ mtr } 40 \text{ cm} \\ + 25 \text{ mtr } 27 \text{ cm} \\ \hline \end{array}$

2.  $\begin{array}{r} 36 \text{ mtr } 75 \text{ cm} \\ + 15 \text{ mtr } 15 \text{ cm} \\ \hline \end{array}$

3.  $\begin{array}{r} 22 \text{ mtr } 35 \text{ cm} \\ + 19 \text{ mtr } 40 \text{ cm} \\ \hline \end{array}$

4.  $\begin{array}{r} 50 \text{ mtr } 25 \text{ cm} \\ + 35 \text{ mtr } 55 \text{ cm} \\ \hline \end{array}$

Guess the sum :

1.  $42 \text{ mtr } 35 \text{ cm} + 57 \text{ mtr } 20 \text{ cm}$
2.  $64 \text{ mtr } 21 \text{ cm} + 27 \text{ mtr } 49 \text{ cm}$
3.  $25 \text{ mtr } 31 \text{ cm} + 65 \text{ mtr } 29 \text{ cm}$

Now verify your guess.

## Mathematics - 4

**Example**

Mohan's house is 25 mts and 90 cm from the well. Asif's house is 37 mtr 65 cm from Mohan's house. What is the distance of Asif's house from the well ?

$$\begin{array}{r} 25 \text{ mts } 90 \text{ cm} \\ + 37 \text{ mts } 65 \text{ cm} \\ \hline 62 \text{ mts } 155 \text{ cm} \end{array}$$

$$\begin{array}{l} \text{But } 100 \text{ cm} = 1 \text{ mts} \\ \text{Therefore } 62 \text{ mts } 155 \text{ cm} \\ \hline = 62 \text{ mts \& } 1 \text{ mts } 55 \text{ cm} \end{array}$$

Thus the distance of Asif's house is 63 mts 55 cms from the well.

**This sum (question) can be solved in the given manner also.**

$$\begin{array}{r} 25 \text{ mts } 90 \text{ cm} \\ + 37 \text{ mts } 65 \text{ cm} \\ \hline 63 \text{ mts } 55 \text{ cm} \end{array}$$

**First guess then add and answer**

1. 43 mts 45 cm & 32 mts 75 cm
2. 26 mts 85 cm & 18 mts 35 cm
3. 148 mts 55 cm & 71 mts 45 cm
4. 65 mts 25 cm & 25 mts 75 cm

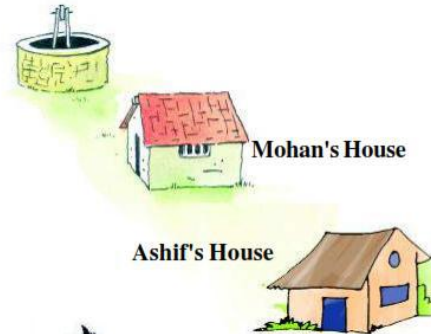
Now check your guess

**One more example**

$$\begin{array}{r} 45 \text{ cm } 9 \text{ millimetre} \\ + 12 \text{ cm } 7 \text{ millimetre} \\ \hline 57 \text{ cm } 16 \text{ millimetre} \\ 57 \text{ cm } 16 \text{ millimetre} \\ \hline = 57 \text{ cm \& } 1 \text{ cm } 6 \text{ millimetre} \\ = 58 \text{ cm } 6 \text{ millimetre} \end{array}$$

**Add:**

1. 45 cm 3 millimetre & 18 cm 6 millimetre
2. 86 cm 7 millimetre & 53 cm 8 millimetre
3. 39 cm 5 millimetre & 28 cm 5 millimetre
4. 68 cm 4 millimetre & 30 cm 9 millimetre



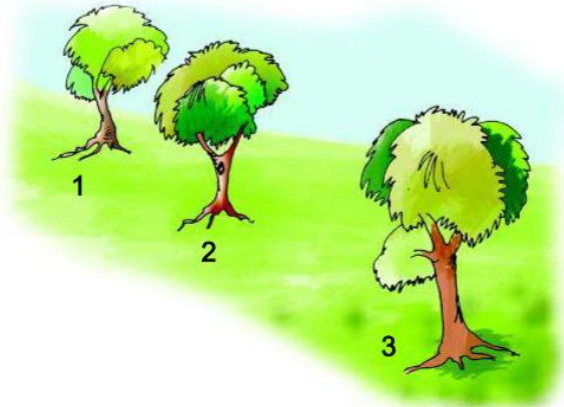


**How to subtract****Example**

First tree is 45 mts 50 cms far from third tree. Second tree is 25 mts 20 cms far from the third tree.

Answer what is the distance between first and second tree?

$$\begin{array}{r} 45 \text{ mts } 50 \text{ cm} \\ - 25 \text{ mts } 20 \text{ cm} \\ \hline 20 \text{ mts } 30 \text{ cm} \end{array}$$



Thus the difference between first and second tree is 20 mts and 30 cms.

**How to subtract these :**

$$\begin{array}{r} 72 \text{ mts } 10 \text{ cm} \\ - 32 \text{ mts } 25 \text{ cm} \\ \hline \end{array}$$

you cannot subtract 25 cms from 10 cms  
 $- 32 \text{ mtr } 25 \text{ cm}$  therefore change into centimetre  
 $1 \text{ mtr} = 100 \text{ cm}$   
 Therefore 72 mtrs 10 cms will be 71 mtrs 110 cm

**Now you can subtract easily**

$$\begin{array}{r} 71 \text{ mts } 110 \text{ cm} \\ - 32 \text{ mts } 25 \text{ cm} \\ \hline 39 \text{ mts } 85 \text{ cm} \end{array}$$

**First guess then subtract and answer:**

1. 25 mts 20 cm from 48 mts 40 cm
2. 13 mts 75 cm from 31 mts 65 cm
3. 12 mts 90 cm from 18 mts 60 cm
4. 52 mts 70 cm from 85 mts 50 cm

**One more example :**

The length of a mat is 18 mts 45 cms. What will be the total length of four such mats ?

**Solution:** You know how to solve this question. We have to do multiplication.

$$18 \text{ mts } 45 \text{ cm} \times 4$$

First 45 cm is multiplied by 4 then 18 mts



**Mathematics - 4**

is multiplied by 4 That comes to

72 mts 180 cm

But you know :

180 cm = 1 mts 80 cm

Therefore 72 mtr 180 cms is 73 mts and 80 cms

Thus the total length of four mats will be 73 mts 80 cms.

**First guess then solve :**

1. Multiply 15 mts 50 cms by 3
2. Multiply 19 mts 62 cms by 2
3. Multiply 22 mts 56 cms by 5
4. Multiply 29 mts 44 cms by 2

**Some questions :**

1. One roll of cloth contains 25 mts 45 cms cloth. How many metres will be there in eight such rolls?
2. Prachi has 42 mts 70 cms rope for making flag .Nisha has 38 mtr 85 cms rope. Tell what is the total length of the rope both have?
3. Rekha has to tie 8 ropes in her room. If the length of the room is 4 metre 16 cm , then what is the minimum length of rope she will require?
4. One shopkeeper sells 18 mts 50 cms of cloth from a roll of 32 mts 46 cms. Tell how much cloth will remain with him?
5. To make a mosquito net 5 mts 75 cms cloth is required. How much cloth will be required to make 20 mosquito nets?
6. 15 pipes are needed for tap connection to a house. If length of each pipe is 5 mts 95 cms. Tell the distance of the house from main pipe?

**Weight**

Take one kilogram weight in your hand. Now feel its weight. Now find out some items from your neighbourhood which weighs 1 kilogram.

Write the names of the items which weigh equal to the weight given in the following table:

## Measurement

Weight	Names of items
1 kilogram	
500 gms	
200 gms	
100 gms	one apple
50 gms	2 lemons



Names of some items are given below. First guess and tell their weight. Then weigh these items in a weighing machine and write their actual weight in front of the items :

Name of item	Weight by guess (in Kilogram or gram)	Actual weight (in Kilogram or gram)
Maths book		
Duster		
Bell		
Lock		
Slate		
A box of chalk		

1 Kilogram	= 1000 gms
$\frac{1}{2}$ Kilogram	= 500 gms
$\frac{1}{4}$ Kilogram	= 250 gms

**Tell how much**

5 Kilogram 250 gms	5250 gms
17 Kilogram 400 gms	-----
28 Kilogram 50 gms	-----
35 Kilogram 850 gms	-----
45 Kilogram 800 gms	-----
98 Kilogram 950 gms	-----





## Mathematics - 4

**Some more questions :**

7300 gms =	-----	Kilogram	-----	gms
18350 gms =	-----	Kilogram	-----	gms
17800 gms =	-----	Kilogram	-----	gms
35050 gms =	-----	Kilogram	-----	gms
65000 gms =	-----	Kilogram	-----	gms

**Example :** Two bags of paddy were weighed. In one bag it was 17 kgs 450 gms and in the other it was 16 kgs 700 gms. If we mix the paddy of both the baskets then tell what is the total weight of the paddy ?

Kilogram	gms
17	450
+ 16	700
<hr/>	
33	1150

Total weight of the paddy = 33 Kilogram 1150 gms

$$= 33 \text{ Kilogram} + 1000 \text{ gms} + 150 \text{ gms}$$

$$= 33 \text{ Kilogram} + 1 \text{ Kilogram} + 150 \text{ gms}$$

$$= 34 \text{ Kilogram } 150 \text{ gms}$$

$$1000 \text{ gram} = 1 \text{ Kilogram}$$

**First guess the sum and then add properly and tell the total weight of the following :**

- 28 Kilograms 250 gms & 19 Kilograms 850 gms
- 67 Kilograms 300 gms & 25 Kilograms 800 gms
- 9 Kilograms 650 gms & 26 Kilograms 750 gms
- 34 Kilograms 900 gms & 17 Kilograms 350 gms
- 52 Kilograms 250 gms & 33 Kilograms 700 gms

What is the difference between your guess and the addition done by you ?

**Example:** One shopkeeper purchased 80 kgs 950 gms of rice. Out of this he sold 46 kg 750 gms of rice. Tell how much quantity of rice is left with him.

Kilogram	gms
80	950
– 46	750
<hr/>	
34	200

## Measurement

**First guess, then by subtracting tell how much is left :**

1. 32 Kilogram 650 gms from 68 kilograms 700 gms.
2. 56 Kilogram 200 gms from 175 kilograms 450 gms.
3. 85 Kilogram 500 gms from 337 kilograms 500 gms.
4. 25 Kilogram from 85 Kilogram.
5. 115 Kilogram 100 gms from 228 Kilogram 350 gms.

What is the difference between your guess and the subtraction done by you ?

**Example:** A packet contains 1 kg 200 gms toffees. What is the weight of 7 such packets.

Kilogram	gms
1	200
	$\times 7$
7	1400

$$\begin{aligned}
 &= 7 \text{ Kilogram} + 1400 \text{ gms} \\
 &= 7 \text{ Kilogram} + 1000 \text{ gms} + 400 \text{ gms} \\
 &= 8 \text{ Kilogram} + 400 \text{ gms}
 \end{aligned}$$

### How much :

1. 8 kgs 500 gms multiplied by 7
2. 4 kgs 600 gms multiplied by 2
3. 12 kgs 300 gms multiplied by 3
4. 20 kgs 200 gms multiplied by 4
5. A sack contains 47 kgs 500 gms of rice. Tell, how much quantity of rice will be there in 12 sacks?
6. Weight of a biscuit packet is 50 gms. What will be the weight of 50 packets?
7. Weight of a basket of oranges is 12 kgs 650 gms. What will be the weight of 7 baskets of oranges?
8. 25 kgs 800 gms potatoes and 28 kgs 700 gms tomatoes are grown in Rahul's field. Find the total weight of the vegetables.
9. Rekha went to market with 15 kgs 250 gms groundnut. She sold 12 kgs 750 gms of groundnuts during the whole day. Tell how much groundnut is left with her.
10. Rehana filled 2 kg 800 gms of cotton in a quilt and 4 kg 500 gms in a mattress. What was the total quantity of cotton filled in quilt and mattress?

## Mathematics - 4

## Capacity

In the previous class you filled a 1 litre container with 500ml, 200ml, 100ml, measuring cans of water. Do it once more.

**Container of 1 litre**

- How many 500 ml cans can fill the 1 litre container? .....times
- How many 200 ml cans can fill the 1 litre container? .....times
- How many 100 ml cans can fill the 1 litre container? .....times

Can you tell, how much water can be there in a container of 1 litre? Now tell us 1 litre equals to how many millilitres?

.....

In the morning Ramu's mother was doing her work. Then the milkman came. Ramu's mother told Ramu to bring one container and take two litres of milk. As soon as Ramu went to the milkman the milkman said "Son it will not contain two litres of milk". Tell why the milkman told this to Ramu? .....

**Let's find it**

Collect the items given below with the help of your friends

buckets, jug, glass and cup.

Guess - How much of water will bucket, jug, glass and cup contain ?

Write your guess in the table given below:

Item	Capacity (by guess)	Capacity (by measuring)	Difference
Bucket			
Jug			
Glass			
Cup			

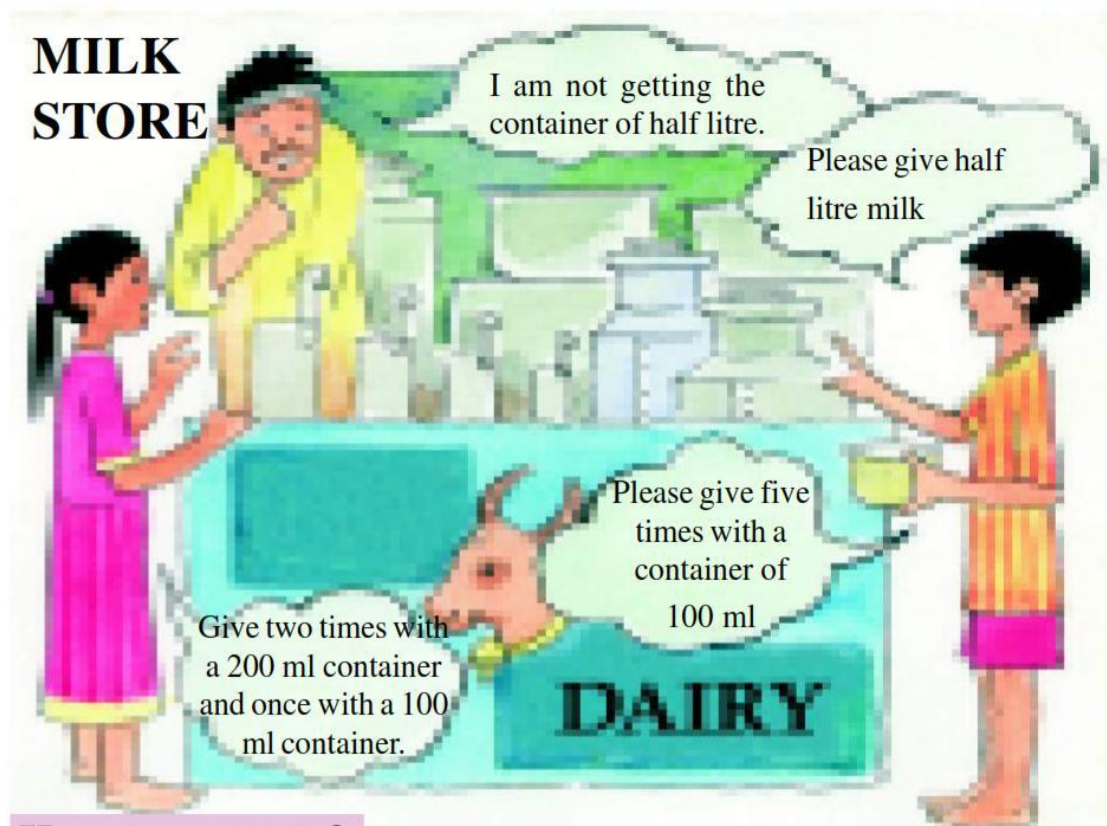
Now fill water in these containers by measuring pots. How much water does each container have?

Write in the table .

Find out what is the difference between your guess and actual measurement.







### How to measure?

Measurement	1 litre	500 ml	200 ml	100 ml	50 ml
1. 800 ml water	0	1	1	1	0
2. 250 ml milk					
3. 950 ml oil					
4. 50 ml medicine					
5. 3 ltr 650ml diesel					
6. 7 ltr 150 ml petrol					

Tally your table with your friends table

### Fill in the blanks with litre and millilitres:

- 200.....of medicine is there in a medicine bottle.
- 1.....of kerosine oil is there in stove.
- 500.....of kerosine oil is there in lamp.
- 25.....of diesel is there in tractor tank.

## Mathematics - 4

**Example:** Convert 3 litre into millilitre  
 $3 \text{ litres} = 1 \text{ litre} + 1 \text{ litre} + 1 \text{ litre}$   
 $= 1000 \text{ millilitre} + 1000 \text{ millilitre} + 1000 \text{ millilitre}$   
 $= 1000 \times 3 \text{ millilitre}$   
 $= 3000 \text{ millilitre}$

**Example:** Convert 5 ltrs 250 ml into millilitres  
 $= 5 \text{ litres} + 250 \text{ millilitre}$   
 $= 5 \times 1000 \text{ millilitre} + 250 \text{ millilitre}$   
 $= 5000 \text{ millilitre} + 250 \text{ millilitre}$   
 $= 5250 \text{ millilitre}$

**Exercise :**

Some units of litre are given below . Convert them into millilitre

1. 6 litres
2. 8 litres
3. 2 litres 300 millilitre
4. 3 litres 50 millilitre
5. 7 litres
6. 5 litres 425 millilitre

**Conversion of millilitre into litre**

**Example:** Convert 2000 ml into litres  
 $2000 \text{ millilitre} = 1000 \text{ millilitre} + 1000 \text{ millilitre}$   
 $= 1 \text{ litres} + 1 \text{ litres}$   
 $= 2 \text{ litres}$

**Example:** Convert 4430ml into litres  
 $4430 \text{ millilitre} = 4000 \text{ millilitre} + 430 \text{ millilitre}$   
 $= 4 \text{ litres} + 430 \text{ millilitre}$   
 $= 4 \text{ litres } 430 \text{ millilitre}$

**Convert the followings :-**

1. 2350 millilitre
2. 7800 millilitre
3. 9650 millilitre
4. 4270 millilitre
5. 3020 millilitre
6. 1030 millilitre

**Example:** Rambharose takes out 9 ltr 550 ml kerosene oil on the first day and 7 ltrs 250 ml on the second day from a drum. What is the total quantity of kerosin oil he took out ?

litres	millilitres
9	550
+ 7	250
<div style="display: flex; justify-content: space-between; width: 100%;"> <span style="text-align: right; padding-right: 20px;">16 litres</span> <span>800 millilitres</span> </div>	

## Measurement

**Example:** Mukesh purchased 10 ltrs 500 ml of diesel. He poured 6 ltrs 200 ml of diesel in his tractor. Tell how much diesel is left with him ?

litres	millilitres
10	500
— 6	200
<hr/>	
4 litres	300 millilitres

**Example:** A glass can contain 250 millilitres of milk. Tell how much milk can be there in 7 glasses.?

$$\begin{aligned}
 \text{Milk in 7 glasses} &= 250\text{ml} \times 7 \\
 &= 1750 \text{ millilitres} \\
 &= 1 \text{ litres } 750 \text{ millilitres}
 \end{aligned}$$

**Exercise :**

1. There is a buffalo and a cow in Salma's house. The buffalo gives 6 litres 550 ml and the cow gives 5 litres and 325 ml of milk. Tell how much quantity of milk is there in Salma's house ?
2. A barrel contains 13 litres 800 ml of oil. Out of this 6 ltrs 900 ml is sold. Tell how much oil is left in the barrel ?
3. If a bottle is filled with water by a 10 ml spoon it takes 20 spoons to fill the bottle . What is the capacity of the bottle ?
4. Raju drinks 250 millilitres milk everyday and Mina drinks 150 ml milk everyday. How much milk will they drink in five days ?
5. Which quantity is greater between 9 ltrs 500 ml and 9850 ml by how much more ?



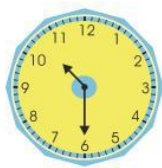


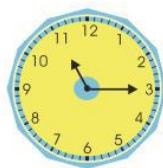
## Unit 7

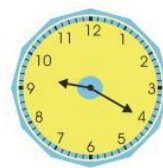
# Time

Look at the pictures and tell the time:

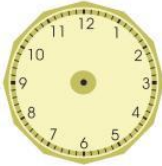




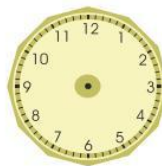





Draw the needle of the clocks for the given time



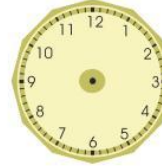
30 minutes past  
5 O'clock



15 minutes past  
4 O'clock

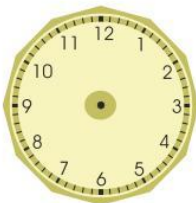


11 O'clock



20 minutes past  
4 O'clock

The hours needle is drawn in the clock. You draw the minute needle



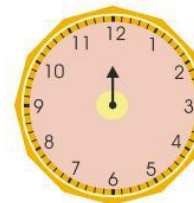
10 minutes past  
10 O'clock



30 minutes past  
11 O'clock



45 minutes past  
4 O'clock



12 O'clock

TIME

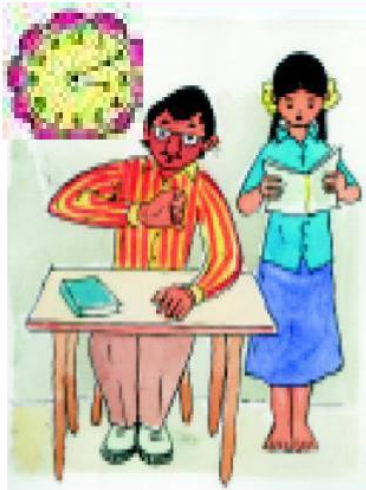
It is  
going to  
be 10  
O'clock.  
Don't  
you have  
to go to  
school.



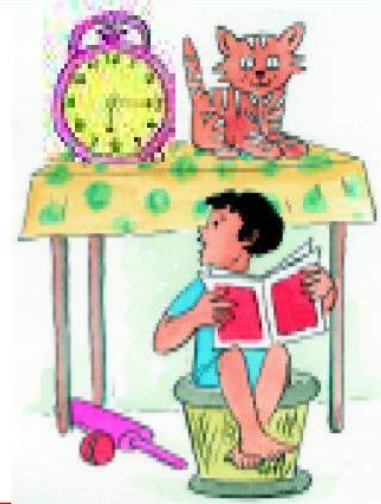
It is  
going to  
be 10  
O'clock.  
We will  
play kho  
kho in  
the  
recess.



It is  
already 3  
O'clock.  
7<sup>th</sup>  
period has  
not  
started  
yet.



Oh it is  
already 6  
O'clock. I  
have  
not gone  
to play till  
now.



How much time do you take to do these works :



Eating food -----



Offering prayer in school -----

## Mathematics - 4



Playing in the evening \_\_\_\_\_



In taking bath \_\_\_\_\_

How much time do you take to do these activities ?

	By guess	Actual
Time taken in eating food	_____	_____
Time taken in offering prayer	_____	_____
Playing in the evening	_____	_____
In taking bath	_____	_____
In wearing your shoes	_____	_____

Put a (✓) sign on the time which is more

2 hours &amp; 30 minutes      170 minutes

70 minutes      1 hour

5 hours &amp; 25 minutes      350 minutes

1 hour 40 minutes      140 minutes

**Change and write**

2 hours      =      120 minutes

1 hour &amp; 10 minutes = \_\_\_\_\_

\_\_\_\_\_ =      130 minutes

2 hours &amp; 50 minutes = \_\_\_\_\_

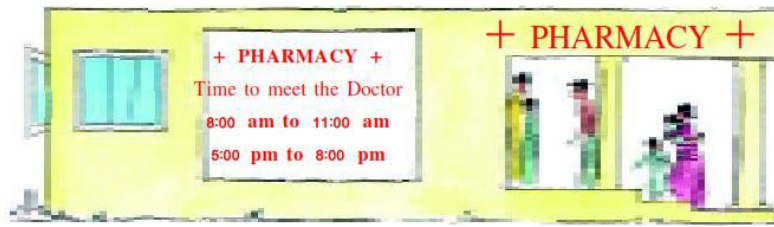
\_\_\_\_\_ =      90 minutes





## TIME

There are several ways to tell the time which are different from these ways. You can see one way on the board.



Do you know the meaning of am and pm

### Lets See.

- |    |   |                   |
|----|---|-------------------|
| 1. | 12 O'clock in the daytime                                 | afternoon or noon |
| 2. | 12 O'clock in the afternoon to 12 O'clock in the midnight | pm                |
| 3. | 12 O'clock in the midnight                                | midnight          |
| 4. | 12 O'clock in the midnight to 12 O'clock in the afternoon | am                |

a.m. is called ante meridiem and  
p.m. is called post meridiem.

### Write the time in am and pm

5:30 in the morning	=	5.30 am
6.15 in the evening	=	6.15 pm
10.00 at night	=	.....
8.45 in the morning	=	.....
4.00 in the evening	=	4.00 .....
11 in the morning	=	.....
8.30 in the evening	=	.....
2.30 in the afternoon	=	2.30 .....
11.15 at night	=	.....

### See and understand:

Football match started at 9.00 am

And ends at 11.00 am

Tell how much time it took to complete the match?

From 9.00AM to 11.00am

= 11.00 – 9.00 = 2 hours

Therefore it took 2 hours to complete the match

A train starts from Raigarh at

6.00 PM and reaches Raipur in

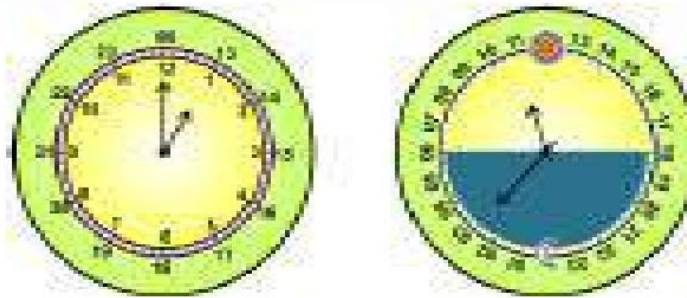
5 hours. At what time the train reaches Raipur ?

From 6.00AM + 5 hours

6.0 + 5.00 = 11.00 AM

Therefore the train reaches Raipur At 11.00 AM

## Mathematics - 4



Are these watches like your watch?  
Can time be known (seen) from these?

**Watches like these are known as 24 hours watches.**

<b>Time according to you watch (12- hours watch)</b>	<b>Time according to 24 hour watch</b>
1: 00 o'clock in the afternoon	13: 00 o'clock
2: 00 o'clock in the afternoon	14: 00 o'clock
3: 30 o'clock in the afternoon	15: 30 o'clock
6: 00 o'clock in the evening	18: 00 o'clock
9: 00 o'clock at night	21: 00 o'clock

**Now answer -**

<b>Time according to (12- hours watch)</b>	<b>Time according to 24 hour watch</b>
1: 30 o'clock in the afternoon	.....
3: 00 o'clock in the afternoon	.....
5: 45 o'clock in the evening	.....
7: 00 o'clock in the evening	.....
10: 00 o'clock at night	.....
12: 00 o'clock at night	.....

TIME

**Practice**

1. Nehas school starts at 7.00 am and gets over at 11.00 am. Tell for how much time the school runs ?
2. A bus starts from Ambikapur at 4.00 am and reaches Jashpur in 7 hours. Tell at what time the bus reaches Jashpur ?
3. A drama starts at 8.00 pm and ends at 11.00 pm . Tell for how much time did the drama continue ?
4. Suniti starts her homework at 6.20 pm and completes it by 8.20 pm . Tell how much time did Suniti takes to complete her homework ?

**The calendar for the month of January is given.**

**Please go through it and answer the questions given below :**

January 2009				
Sun	4	11	18	25
Mon	5	12	19	26
Tue	6	13	20	27
Wed	7	14	21	28
Thu	1	8	15	22
Fri	2	9	16	23
Sat	3	10	17	24
				31

1. In January 2009 which are the dates that come on Monday ?  
\_\_\_\_\_
2. The first Sunday is on 4<sup>th</sup> January, what will be the date of second Sunday  
\_\_\_\_\_
3. The third Wednesday is on 21 th., January , then what was the date on second Wednesday ?  
\_\_\_\_\_
4. In this month which day comes four times ?  
\_\_\_\_\_
5. In this month which day comes five times ?  
\_\_\_\_\_
6. In this month which day comes three times ?  
\_\_\_\_\_
7. In this month which day comes six times ?  
\_\_\_\_\_
8. Can any day come 3 or 6 times in a month ?  
\_\_\_\_\_



## Mathematics - 4

## कैलेंडर 2007

## जनवरी

रवि	7	14	21	28	
सोम	1	8	15	22	29
मंगल	2	9	16	23	30
बुध	3	10	17	24	31
गुरु	4	11	18	25	
शुक्र	5	12	19	26	
शनि	6	13	20	27	

## फरवरी

रवि	4	11	18	25
सोम	5	12	19	26
मंगल	6	13	20	27
बुध	7	14	21	28
गुरु	1	8	15	22
शुक्र	2	9	16	23
शनि	3	10	17	24

## मार्च

रवि	4	11	18	25	
सोम	5	12	19	26	
मंगल	6	13	20	27	
बुध	7	14	21	28	
गुरु	1	8	15	22	29
शुक्र	2	9	16	23	30
शनि	3	10	17	24	31

## अप्रैल

रवि	1	8	15	22	29
सोम	2	9	16	23	30
मंगल	3	10	17	24	
बुध	4	11	18	25	
गुरु	5	12	19	26	
शुक्र	6	13	20	27	
शनि	7	14	21	28	

## मई

रवि	6	13	20	27	
सोम	7	14	21	28	
मंगल	1	8	15	22	29
बुध	2	9	16	23	30
गुरु	3	10	17	24	31
शुक्र	4	11	18	25	
शनि	5	12	19	26	

## जून

रवि	3	10	17	24	
सोम	4	11	18	25	
मंगल	5	12	19	26	
बुध	6	13	20	27	
गुरु	7	14	21	28	
शुक्र	1	8	15	22	29
शनि	2	9	16	23	30

## जुलाई

रवि	1	8	15	22	29
सोम	2	9	16	23	30
मंगल	3	10	17	24	31
बुध	4	11	18	25	
गुरु	5	12	19	26	
शुक्र	6	13	20	27	
शनि	7	14	21	28	

## अगस्त

रवि	5	12	19	26	
सोम	6	13	20	27	
मंगल	7	14	21	28	
बुध	1	8	15	22	29
गुरु	2	9	16	23	30
शुक्र	3	10	17	24	31
शनि	4	11	18	25	

## सितम्बर

रवि	30	2	9	16	23
सोम	3	10	17	24	
मंगल	4	11	18	25	
बुध	5	12	19	26	
गुरु	6	13	20	27	
शुक्र	7	14	21	28	
शनि	1	8	15	22	29

## अक्टूबर

रवि	7	14	21	28	
सोम	1	8	15	22	29
मंगल	2	9	16	23	30
बुध	3	10	17	24	31
गुरु	4	11	18	25	
शुक्र	5	12	19	26	
शनि	6	13	20	27	

## नवम्बर

रवि	4	11	18	25	
सोम	5	12	19	26	
मंगल	6	13	20	27	
बुध	7	14	21	28	
गुरु	1	8	15	22	29
शुक्र	2	9	16	23	30
शनि	3	10	17	24	

## दिसम्बर

रवि	30	2	9	16	23
सोम	31	3	10	17	24
मंगल	4	11	18	25	
बुध	5	12	19	26	
गुरु	6	13	20	27	
शुक्र	7	14	21	28	
शनि	1	8	15	22	29

TIME

**See the calender and say**

1. Which are the months which have thirty days ?

-----

2. Which are the months which have thirty-one days ?

-----

3. How many days are there in February ?

-----

**Tally the months in year 2006 with the months in year 2007 from the calendars.**

In 2006 , the months which have 30 days, in 2007 do they have 30 days.

Does the months having 31 days in 2006 have the same days in 2007 ?

**Now tell these also:**

1. In Dussehra the holidays were given on 17, 18 and 19. Tell how many holidays were given

-----

2. In Chandu's school Annual Sports was held from 10<sup>th</sup> January to 14<sup>th</sup> January. Write the dates on which sports were held. Tell for how many days the sports was held ?

-----

-----

3. Half yearly exams was from 8<sup>th</sup> December to 12<sup>th</sup> December. Tell for how many days were the exams conducted?

-----

4. In school the preparations for cultural programmes was from 21<sup>st</sup> January to 25<sup>th</sup> January. Tell for how many days did the preparations go on.

-----



## Unit 8

# GEOMETRY

## Surface



Collect the items given in the picture.

Roll all these items on the table one by one

Name are the items which rolled \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

Name are the items that didn't roll \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

Can the books be kept one above the other? Try and see.

Can the dice be kept on a book? Can a marble be kept on a ball? Try and see.

Can you place a ball on a ball? Try and see.

Can a marble be kept on a ball? Try and see.

Can you tell why this happens ?



Now feel with your hand the surface of the book, dice and

ball. The surface of the book and dice is flat that's why we can keep them one on the other and we can't roll it. This type of surface is known as **plain surface**.

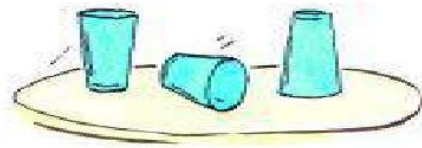
The surface of the ball is round. That is why we can not keep them one above the other. This can roll of. This type of surface is called spherical or **round surface**.



## GEOMETRY

**One glance on the glass**

Take one glass. Keep it as shown in the figure.  
Roll it and see...






Which are the kinds of surfaces in a glass ?

.....

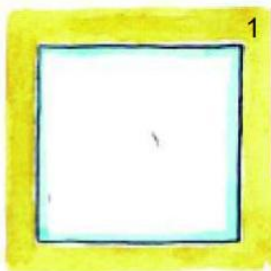
Write name of three items which have both plain surface and spherical surface.

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

Some items are drawn in the table given below. What are the surfaces in these. Write the name of the surfaces.

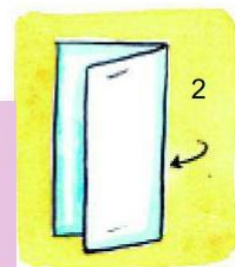
Items	surface
	
	
	

Think and tell which is the biggest surface.

**Let us make a dice.**

1. Cut six square pieces from a drawing sheet

2. Take one of the pieces and fold it at the centre.

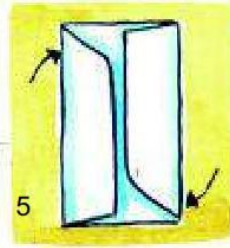
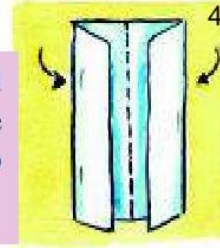


## GEOMETRY



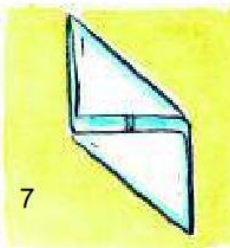
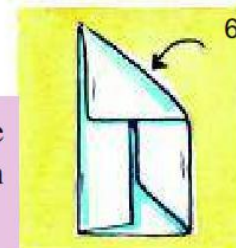
3. Open it , you will get a mark at the centre.

4. Now fold the edges in such a way so that both the edges remain close to each other.



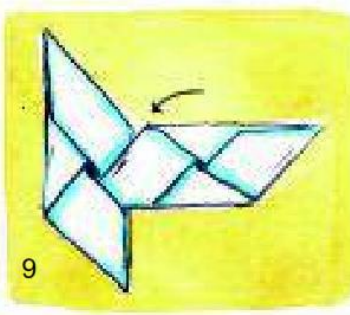
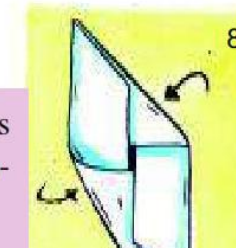
5. Fold upper portion of left side and the lower portion of right side

6. Now fold the right edge as shown in the figure.



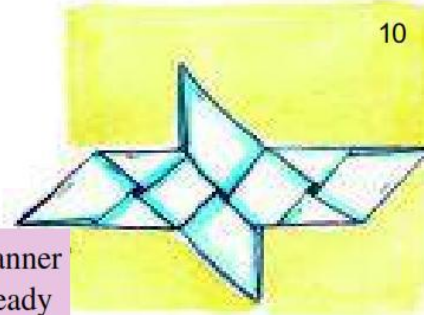
7. Now fold the left side as shown in the figure.

8. Press the folded edges inside In this way fold to total six pieces



9. Join the pieces according to the diagram

10. In this manner your dice is ready



Can you tell how many surfaces are there in the dice made by you ? .....

Upto which number that can be written on its surface starting from 1 ?.....

Write one in any surface of the dice and write 6 just at the back of it. In the same way write 5 at the back of 2 and 4 at the back of 4.

Now the dice is ready for your game.

Now you make things made up of clay and paper in which there is only plain surface, in which there is only spherical surface and in which both spherical and plain surfaces are there.



## LINE & LINE SEGMENT

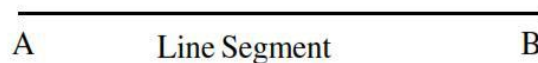
### Point

Take one sharp pencil, now put a mark on a page of the copy. Look at it. This mark is known as a **point**. Sharper the pencil the more accurate would be the mark (the point).



### Line Segment

Draw two points in your copy with a pencil. Write their names A and B. Join them with the help of a scale.



This is a line segment. This is called line segment AB.

### Measure the line segment in this way

Draw a line segment of 5 cm.

According to the figure keep the scale on the paper. Now draw a point at zero with pencil. Draw the second point at 5 cm mark on scale. Join both the points with the help of a scale.

Remove the scale. This is a line segment of 5 cm.

**Now Construct line segments of following lengths**

- |         |         |         |
|---------|---------|---------|
| 1. 6 cm | 2. 8 cm | 3. 7 cm |
| 4. 2 cm | 5. 4 cm | 6. 5 cm |

If line segment is drawn on paper how will you measure that line segment ?



Lets measure this line segment AB. Place the scale and the line segment AB in such a way that zero of the scale lies at A.

Now let us find where B lies on the scale ? Read the mark of the scale against B ?

Therefore the length of line segment A B = .....cm





**Excercise**

Find the length of the line segments given below and write them:

1. P ————— Q
2. X ————— Y
3. A ————— B
4. X ————— Y
5. A ————— B
6. M ————— N

**Line**

A Line segment is given below

A ————— B

If we extend one side of the line segment to infinity then we get the shape of a ray.

A —————→ B

A B is a ray

Can the other end of the ray extend upto infinity?

Extension of line segment, to infinity, on both sides is called line.

←—————→  
A B

A B is a line

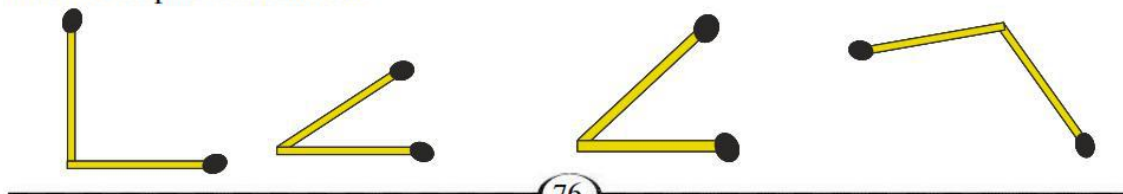
The arrow mark on both sides indicate its infinite extension.



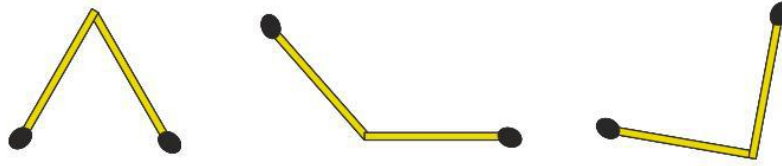
**Line segment is a part of line**

**ANGLE**

Given below are figures made out of match sticks. You can also make similar figures with the help of match sticks.



## GEOMETRY



All the figures made by you depict angles.

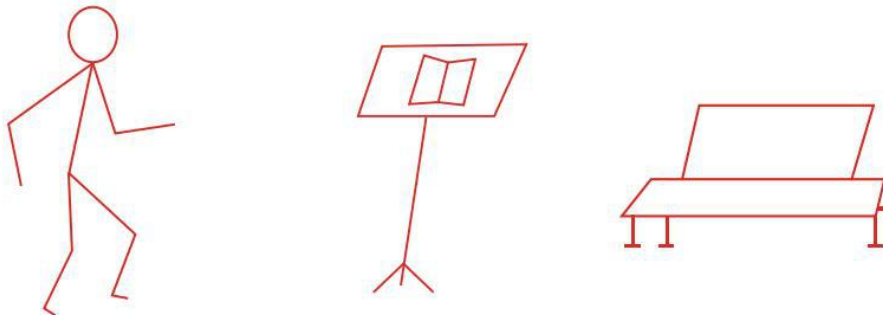
**Now tell**

- How many match sticks were required for one figure .....
- Do the match sticks meet at some point? If we imagine a match sticks as a ray we can say:

**Two rays arising from one point form an angle.**

Observe the items around you and tell where you find angular objects.

**The diagram below has some angles. Recognise these and mark them with a pencil.**

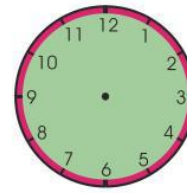
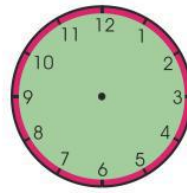
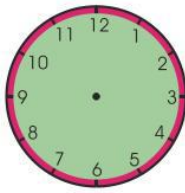
**Angle in a watch**

**Observe the small and big hands of the watch. The hands of the clock also make an angle.**



By changing the position of the hands of the watch the angles also change.

Some figures of watch are given below. Change the position of the hands and make different types of angles.




### Angle with a nail

Insert a nail in the ground. Take a long thread and tie it to the nail in a manner that it has sufficient length on both the sides. Now hold both the ends of the thread and stretch it. Keep the thread stretched.



Observe minutely: does the piece of thread form an angle?

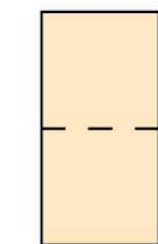
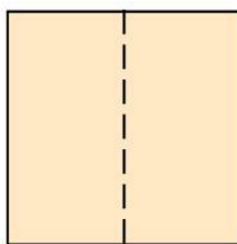
Can you make it small or big? How will you make the smallest angle? How will you make the biggest angle?

Observe the angle in objects around you such as books, black board wall etc. The figures which have  shape are called rightangle.

Sometimes the hands of the watch also form rightangle.

See the watch and tell at what time the hands of the watch form right angles.

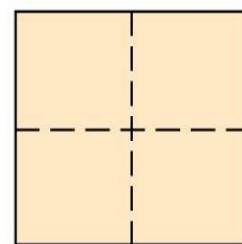
Now take a piece of paper and fold it as shown.



On folding for the first time



On folding for the second time



On Opening

Now open it. You will find that two lines are formed on the paper. They intersect at one point. An angle is formed at this point. There are four equal angles, on the paper. All the angles are called right angles.

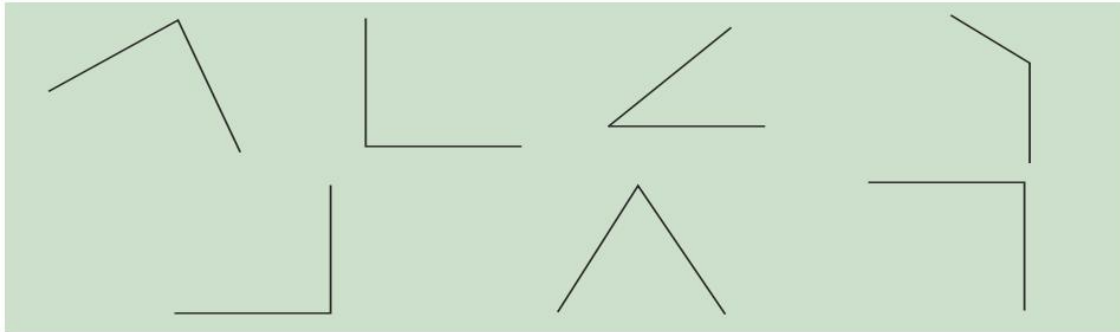
See whether the same type of angles are formed on the four corners of the paper.



## GEOMETRY

**From the below given angles mark the angles which are right angle.**

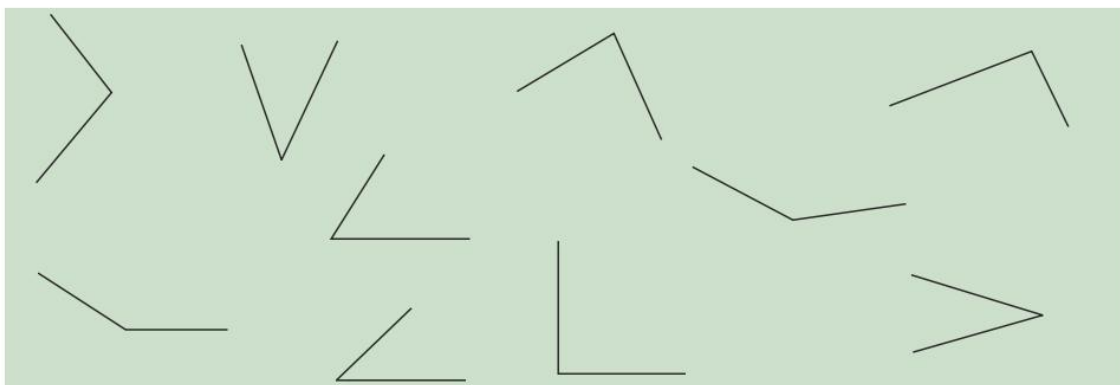
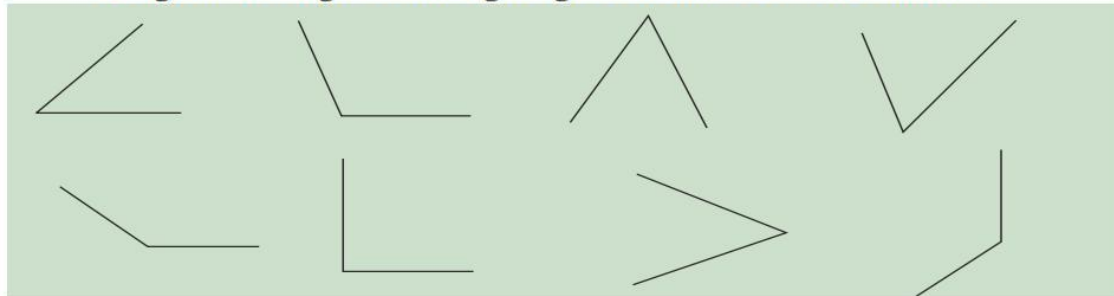
Take a square piece of paper or hard board. (Each angle of the square is a right angle)  
Compare with the figures given below. The angles which are smaller than corner of the piece put '×' mark over them. The angle which are bigger than corner of piece put '✓' mark over them.



The angle on which you had put × mark are acute angles. And the angles on which you have put ✓ mark they are called obtuse angle.

**Angles which are greater than right angle are called Obtuse angles and the angles which are smaller than right angle are called acute angles.**

**Recognize the angles in the figure given below. Write their names.**



## Circle



Take a circular coin. Keep it on a page of your copy and draw an outline of it. Now remove the coin and see the drawn shape. Can you make this type of shape from other object ? Write their names-

-----  
-----

Now take any two items and

draw this type of shape. Let us now draw this type of figure in the field. Take a nail, a stick and a rope in the ground. then tie (fasten) the nail with one end of the rope and fasten the other end of the rope at the middle of the stick. Now draw an out line of the nail with the help of stick. Be careful while drawing the out-line make sure that the rope is stretched. What type of shape you get ?



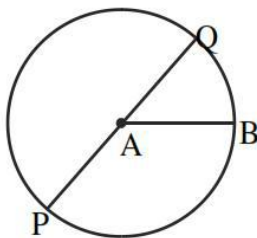
The out-line you get from the coin and the out line you get from drawing a figure by stretching a rope attached to the nail is called a circle:

In the same way you can draw circle by using compass (rounder)

Open a page of your copy keep the compass on the page as shown in the figure. Fix its pointed side at a place and move the pencil around it.



**Come lets now know some facts about circle.**



While drawing a circle where you placed the pointer of the compass that point is called the **centre**.

In the figure 'A' is the centre of the circle.

The line segment that join centre with any point of the circle is called **radius**. In the given figure A B is the radius of the circle.

## GEOMETRY

The line segment that joins two points on the circle which passed through the centre of the circle is called diameter.

Line segment P Q is the diameter of the circle.

**Give answer :**

Just now you have drawn a circle by fixing a nail and rope. Where is the centre of that circle ? Draw one radius of that circle measure it. In same way draw a diameter and measure it also.

### Draw Circle

Tie a chalk on both ends of the thread.

Fix a chalk on the blackboard with your left hand.

Now draw a line with your write hand.

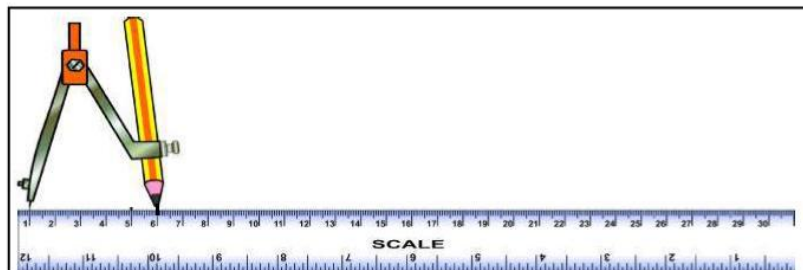
Be careful that the thread should be stretched.

What shape do you get on the black board ? Write the names of the parts.

Make circles of different radic now do this-

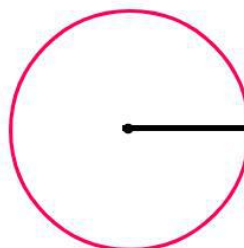
Take out scale, rounder and pencil from you compass box. Now insert the pencil in the rounder. Level the tip of the pencil and the rounder on the notebook.

Now make the distance of 5 c.m. between tip of the pencil and pointed end of the rounder using the c.m. side of the scale.



Now draw a circle on your notebook revolving the rounder.

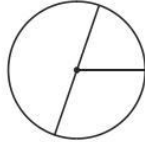
Now measure the radies of the circle and write it.



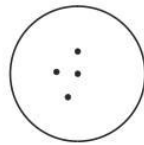
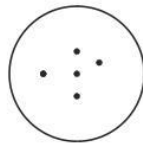
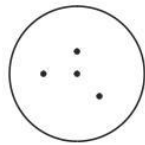


**Exercise :**

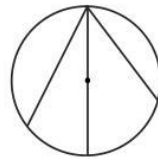
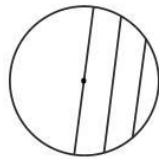
1. Write names of the parts in given figure —



2. Find out (identify) the centre of the circle in given figure.



3. Identify the diameter in the given figures.

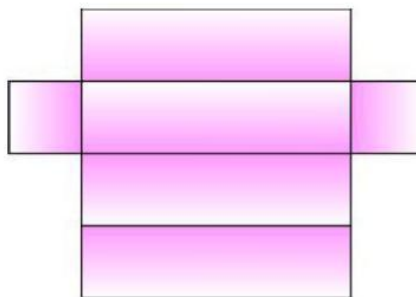


4. Draw a circle of radius 7 cm.  
 5. Draw a circle of radius 3 cm.  
 6. Draw a circle of radius 10 cm.

**Making Cubes, cuboids -**

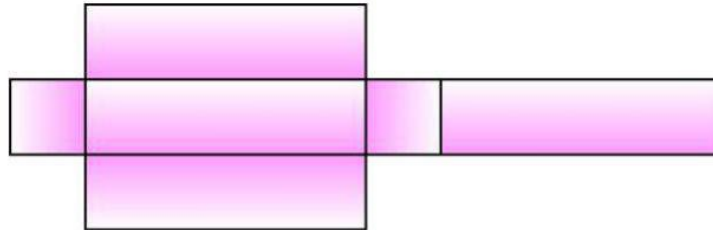
Objects like bricks, chalk boxes, tooth paste boxes etc have cuboids shapes they have 6 rectangular faces.

Take a chalk box / tootpaste box. Cut it and open as shown in the given figure . You will get a net by opening it.



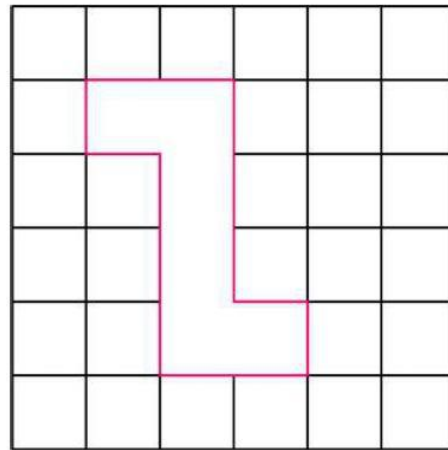
## GEOMETRY

There could be other ways of cutting and opening this box. One of the ways is given here as an example -



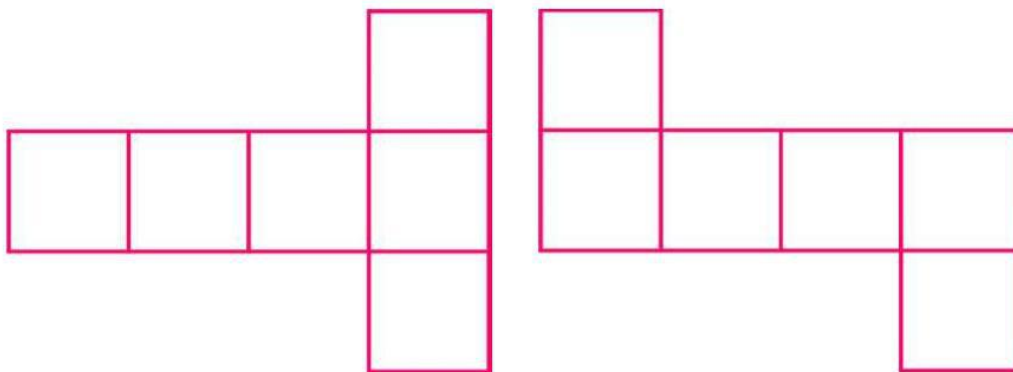
You find some other way and draw its net in your notebook.

Now take a drawing sheet and cut it according to the diagram. Now fold and make a box out of it. Are all the faces equal and square objects like this of having six square phases are cubes in shapes. For is - dice.



### Make cubes from the given net -

All the boxes or the objects are not necessarily cubes or cuboids in shapes. Make cubes from the given net -

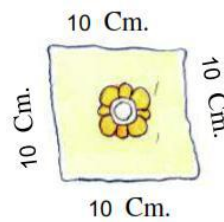


All the boxes or the objects are not necessarily cubes or cuboids in shapes.

## Unit 9

# PERIMETER

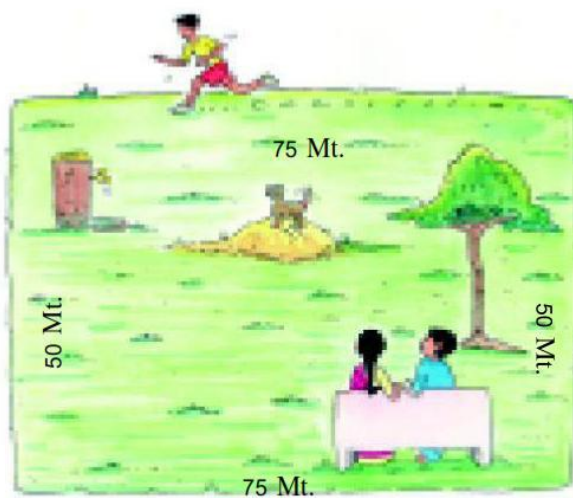
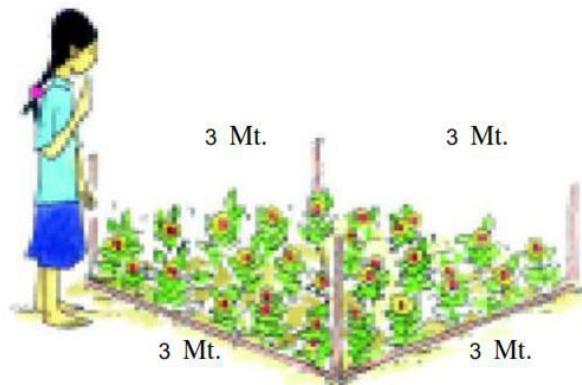
Deepa's mother is stitching on four sides of a handkerchief. By looking at the picture tell how much more stitching she has to do.



How much stitching does she have to do? How will you find out ?

Meeta has planted flowering plants in her courtyard . To save it from animals she wants to make a wire fencing on all four sides.

Can you tell the length of the wire Meeta needs to make the boundary. How will you find out ?



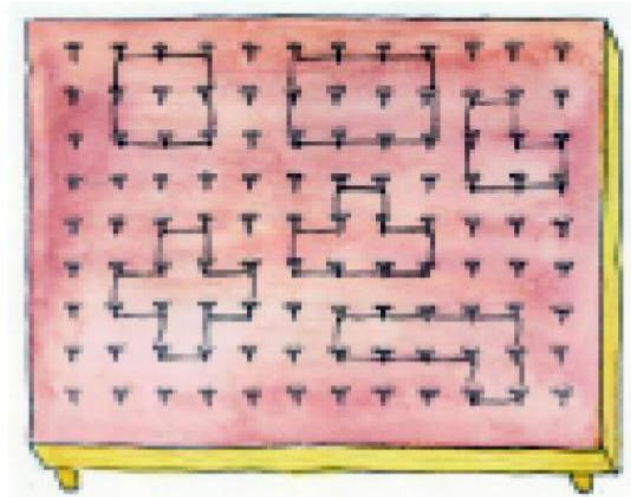
Monu runs on the field daily. Tell how much Monu has to run to take a complete round of the field ?

If he takes 10 rounds of the field how much distance he will cover ?



## PERIMETER

In the figure given below, some shapes are made by thread. The distance between the horizontal and vertical nails is 1 cm.. Now count and tell what length of thread will be required to make the shapes.



Like the length of the threads needed for the first shape is :

$$2\text{cm} + 2\text{cm} + 2\text{cm} + 2\text{cm} = 8\text{ cm}$$

Draw such shapes on the board. Calculate the length of pieces of thread to make these shapes.

**The length of the thread needed to make the shapes in the figure is the perimeter of the figure.**

**Perimeter of slate**

What is the perimeter of your slate ?

To know this, keep the slate on the ground and draw its shape on the floor. Now remove the slate and fix nails on all the four sides.

Starting from one nail, take the thread to the second nail, then third, then fourth and again bring it back to the first nail.



## Mathematics - 4

Make a mark on the point where the thread comes back to the first nail and by stretching the thread measure its length. The length of the thread is the perimeter of your slate.

**In this way find out the perimeter of the things given below:**

1. Matchbox
2. Your book
3. Compass box



**Now with a measuring tape used by a tailor, find out the perimeter of the following :**

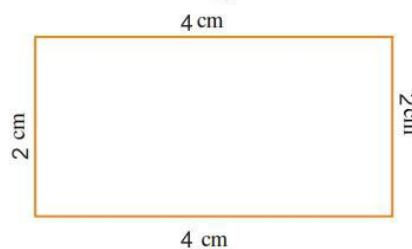
1. your wrist
2. Bangle
3. Ringball
4. your friend's head
5. bottom of a bottle



### Perimeter of a rectangle

Till now you have found out the perimeter of many things. Now let's see how we can find out the perimeter of any shape without using a thread.

What is the perimeter of this rectangle ?



Place a piece of thread on its four sides. The required length of the thread would be

$$4\text{ cm} + 2\text{ cm} + 4\text{ cm} + 2\text{ cm} = 12\text{ cm}$$

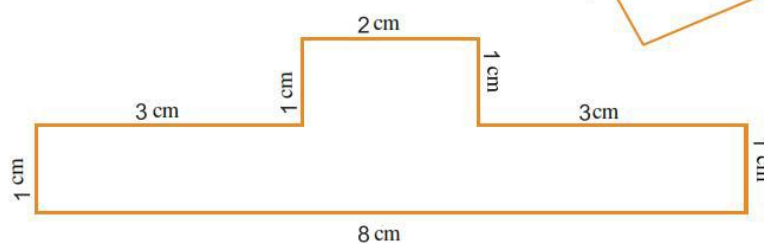
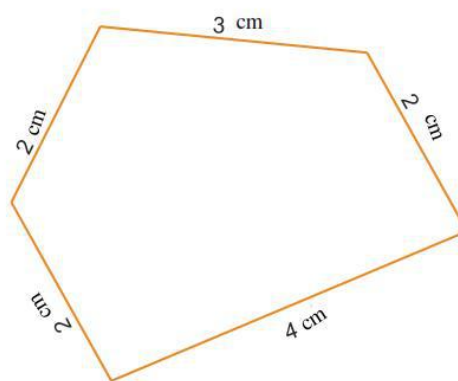
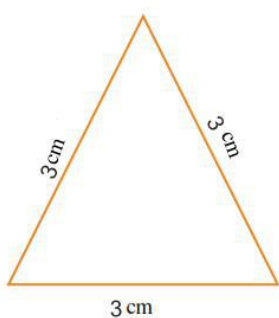
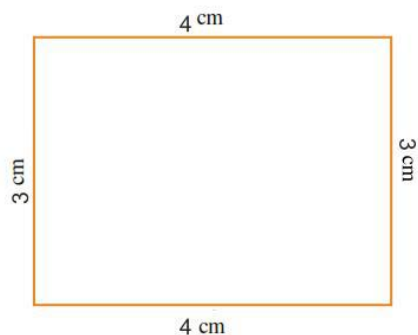
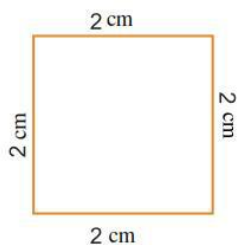
Now we can say the perimeter of the given rectangle = 12 cm

Now say what we have done to find out the perimeter of this rectangle

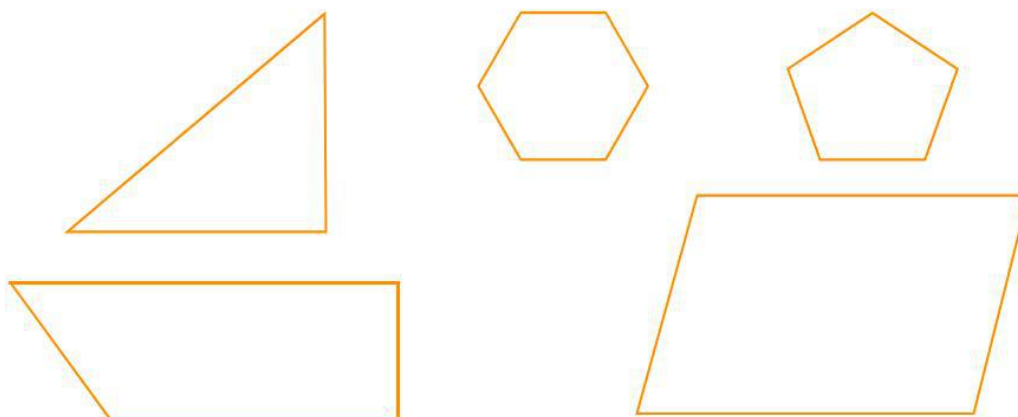
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## PERIMETER

Find the perimeters of figures given below:



Measure the sides of the figures with a scale and find the perimeters.





Mathematics - 4

**Find Out**

1. You have to do fencing on the four sides of your class. What will be the length of rope required to make the fencing. Measure and tell.

**Do it and see**

1. Find out the perimeter of the kabaddi ground ?
2. Find out the perimeter of the kho kho ground ?
3. Can you tell the distance covered by a cycle wheel in one revolution ?
4. Collect some items from your surrounding and find out its perimeter
5. The picture of the courtyard of my house is given below. There are 15 stones in it. Each stone is 1 metre long and 1 metre broad.



You have to find out what is the perimeter of the courtyard ?  
Find out the area of the courtyard also .

## Unit 10

### AREA

One day the teacher came with some packets to the class and told Raju to arrange them on the table but ensure that no packets are kept on top of one another.

Raju saw that all the packets were alike. He started arranging the packets but after arranging 12 packets the surface of the table was totally covered.

**Thus we can say that surface of the table = surface of 12 packets**

#### Now tell :

- Why Raju was not able to arrange all the packets on the table ?
- If the packets would have been smaller then could have Raju arranged more than 12 packets ?
- If the packets would have been larger , then what would have happened ?



#### Measurement by matchbox:

Collect empty match boxes. Arrange these boxes on the surface of your book

How many boxes were arranged ? \_\_\_\_\_

It means surface of book = \_\_\_\_\_ Surface of boxes



## AREA



If you have only one match box then can you measure the surface of your book? How will you measure? Measure and see.

In the first example the table was = the surface of the 12 packets.

In this way the surface of the book = ..... surface of match boxes.

**The surface covered by any shape is called its surface area.**

**Like in the first example the surface area of the table is equal to the surface area of the 12 packets**

Measure the surface of the items given below according to the instructions:

Items	Measure by what	Measure of surface
1. Surface of table	Book	----- Book
2. Book	Match Box	
3. Exercise Book	Match box	
4. Calendars / chart	Page of the copy	
5. Upper surface of box	Copy	

Compare your measurements with your friend's measurements. Did you find any difference ? Think and answer. Why and how did this happen ?

### Measurement with bangles

You have seen arranging the matchboxes on the book. Now you try to arrange the bangles on the book.

- How many bangles are arranged ? .....
- Is the surface of the book covered completely by bangles ?  
.....

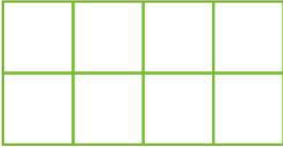





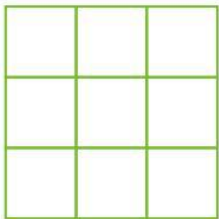

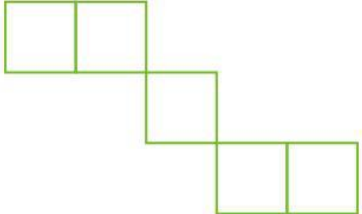
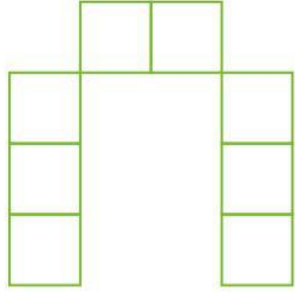
## AREA

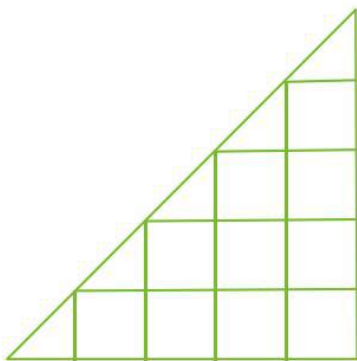
- Was there any blank space while arranging the match boxes on the surface of the book
- Can bangle like shapes be used in measuring the area ?

**Let's count the boxes and find out the area.**

1.  In this figure there are 8 boxes like this  or (1 cm length & 1 cm breadth)  
Thus the area of this figure = 8 boxes

**Tell the area of these figures in terms of small squares :**

<p>1. </p> <p>_____</p>	<p>2. </p> <p>_____</p>
<p>3. </p> <p>_____</p>	<p>4. </p> <p>_____</p>



Can you tell the area of the figure given below by counting the boxes ?

Is there any problem ? Tell how can you find out the area of it ? If you cannot understand then take the help of your teacher.

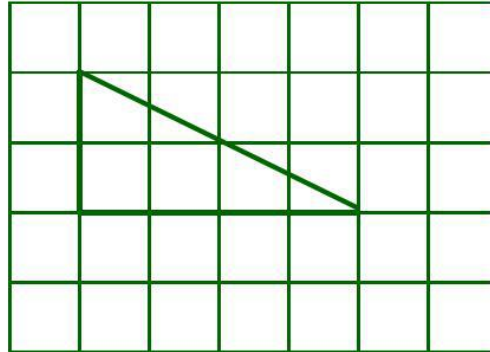
## AREA

What is the area of this triangle ?

Colour the boxes green which cover less than half the area in the triangle.

Now fill blue colour in the remaining boxes in the triangle.

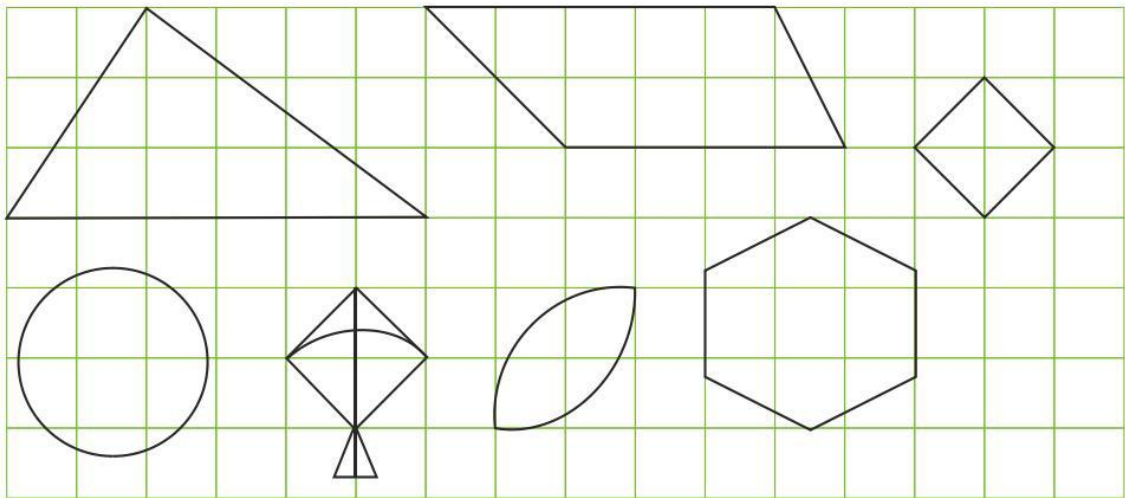
The maximum portion inside the triangle is filled with blue colour, so we can say the area of the triangle is almost equal to the number of blue boxes.



Area of triangle = .....boxes

**When we measure the area by counting boxes, then we do not count the boxes which cover less than half the area. We count the remaining boxes..**

Now you tell the area by filling colours.

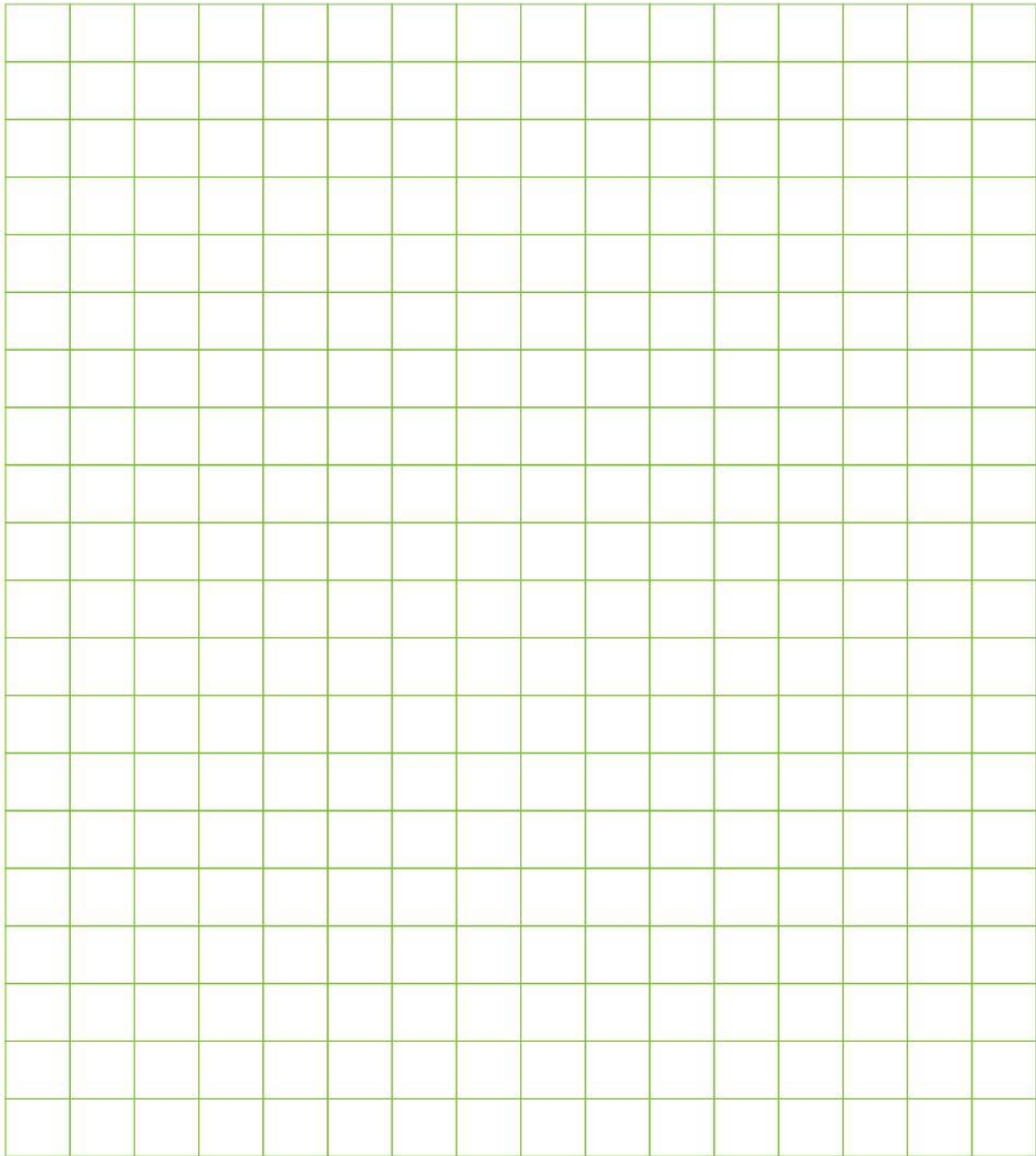


### Area of a leaf

Collect some leaves. Keep the leaves on the grid drawn on the book and draw its outline. Now tell the area of each leaf by counting the boxes.

Leaf	Mango	Peepal	Palash
Area	-----	-----	-----

AREA



**Can you find out the area of your palm. Use the boxes given above. Collect some items according to your wish and also find out there areas.**





## Unit 11

### Money

You have learnt a chapter on money in class - 3. You made a lot of coins and notes with your friends

#### Answer

How many 50 paise coins will you get for ₹ 1

How many 25 paise coins will you get for ₹ 1

You saw that for ₹ 1 you get 2 coins of 50 paise i. e. (that is)

$$50 \text{ p.} + 50 \text{ p.} = 100 \text{ p.}$$

For ₹ 1 you get 4 coins of 25 paise i. e.

$$25 \text{ p.} + 25 \text{ p.} + 25 \text{ p.} + 25 \text{ p.} = 100 \text{ p.}$$

#### You have known that

$$100 \text{ p.} = 1 \text{ ₹}$$

or

$$1 \text{ ₹} = 100 \text{ p.}$$

#### Now answer

How many coins of 50 paise ?

$$1 \text{ ₹} = \dots\dots\dots \text{coins}$$

$$2 \text{ ₹} = \dots\dots\dots \text{coins}$$

$$3 \text{ ₹} = \dots\dots\dots \text{coins}$$

$$4 \text{ ₹} = \dots\dots\dots \text{coins}$$

$$5 \text{ ₹} = \dots\dots\dots \text{coins}$$

$$6 \text{ ₹} = \dots\dots\dots \text{coins}$$

$$7 \text{ ₹} = \dots\dots\dots \text{coins}$$

**How many coins of 25 paise ?**

1 ₹ = .....coins

2 ₹ = .....coins

3 ₹ = .....coins

4 ₹ = .....coins

5 ₹ = .....coins

6 ₹ = .....coins

7 ₹ = .....coins

**Fill in the blanks -**

25 p + 50p + 50p = ..... ₹ .....p

2 ₹ + 5 ₹ + 20p + 20p = ..... ₹ .....p

10 p + 10 p + 10 ₹ + 2 ₹ + 50p = ..... ₹ .....p

10 ₹ + 5 ₹ + 2 ₹ + 25 p + 50 p + 25 p = ..... ₹ .....p

10 p + 20 p + 25 p + 50 p = ..... ₹ .....p

5 ₹ + 10 ₹ + 10 ₹ = ..... ₹ .....p

10 ₹ + 50 ₹ + 50 ₹ = ..... ₹ .....p

20 p + 20 p + 50 p + 3 ₹ = ..... ₹ .....p

1 ₹ + 2 ₹ + 5 p + 50 p = ..... ₹ .....p

**Think and answer (oral)**

1. Samir wants to buy a pen . The cost of the pen is ₹ 5 . How many 50 p coin will samir have to give ?
2. Suman has 8 coins of 25 p. She has to buy a chocolate of wich costr ₹ 1 each. How many coins will she give to the shopkeeper ?
3. Gulshan bought an eraser which costs 50 p. each. She gave ₹ 10 coin. How much amount will the shop keeper return ?

4. How many ₹ 2 coins can we get for ₹ 10.
5. A ball costs ₹ 12 . shourya has ₹ 5. How many more rupees does he need to buy a ball.
6. Sonu has three 5 ₹ note and one 10 ₹ note. How many rupees need to be added to make it ₹ 30 ?
7. Raja has 3 coins of 50 p Gauri has 5 coins 25 p and karan has 4 coins of 20 p. If we add them how much amount will there be?
8. A pencil costs ₹ 2.How much amount needs to be given to buy 7 pencils.
9. Sagar has 10 coins of 20 p. After spending 3 coins, how much amount in rupees and paise will be left.
10. Carrot costs ₹ 30 per kg. How much money will you pay to buy half a kg of carrot.

Lets know this -



How many notes ?

For	₹ 50 .....	notes of ₹ 10
For	₹ 100 .....	notes of ₹ 50
For	₹ 100 .....	notes of ₹ 10
For	₹ 500 .....	notes of ₹ 100
For	₹ 500 .....	notes of ₹ 50



## MONEY

For	₹ 500	.....	notes of ₹ 10
For	₹ 50	.....	notes of ₹ 10
For	₹ 2000	.....	notes of ₹ 500
For	₹ 2000	.....	notes of ₹ 100
For	₹ 2000	.....	notes of ₹ 50
For	₹ 2000	.....	notes of ₹ 10








## Unit 12

# PICTORIAL REPRESENTATION OF DATA

Hamida has a fruit shop. Today she sold many fruits during the day time. Some fruits were left with her. We have drawn these remaining fruits in the table given below:



Remaining fruits	Number
	
	
	
	
	

See the table and give the answer –

- What is the total number of remaining fruits ? \_\_\_\_\_
- Which left over fruit is maximum in number ? \_\_\_\_\_
- How many more guavas are there than oranges ? \_\_\_\_\_

Write two more questions which can be answered by seeing the table given above.

- \_\_\_\_\_
- \_\_\_\_\_

## PICTORIAL REPRESENTATION OF DATA

**Your own liking**

Find out the colours liked by each student and complete the table given below

Colour	Name of student

**Look at the table and give the answers—**

- How many students like blue colour ?  
\_\_\_\_\_
- Which colour is liked by maximum number of students ? \_\_\_\_\_
- Which colour is liked more by the student, red or green ? \_\_\_\_\_
- Which colour is liked by minimum number of students ? \_\_\_\_\_

**Counting in lane**

Sit outside your house for 30 minutes and watch how many men, women and children come out while you sit there. For each one draw a line (|) in front of their box in the given table. Count them and write the total number of lines in the table.





## Mathematics - 4

Who are the passers by	draw lines	total number of lines
Men		
Women		
Boys		
Girls		

- How many people passed from there ? -----
- Boys were more or girls ? -----
- You also form three such questions -
  1. -----
  2. -----
  3. -----

## How many students are on leave

How many students of class 1,2,3,4 and 5 are on leave . Find out and write in the following table. This time you use 😊 to indicate each child.

Class	Children on leave
1	
2	
3	
4	
5	



Tell how many students of class 1 are absent. ?

You can make such questions and give this to a group to solve.

Till now you have collected different types of facts and arranged them horizontally (left to right) .

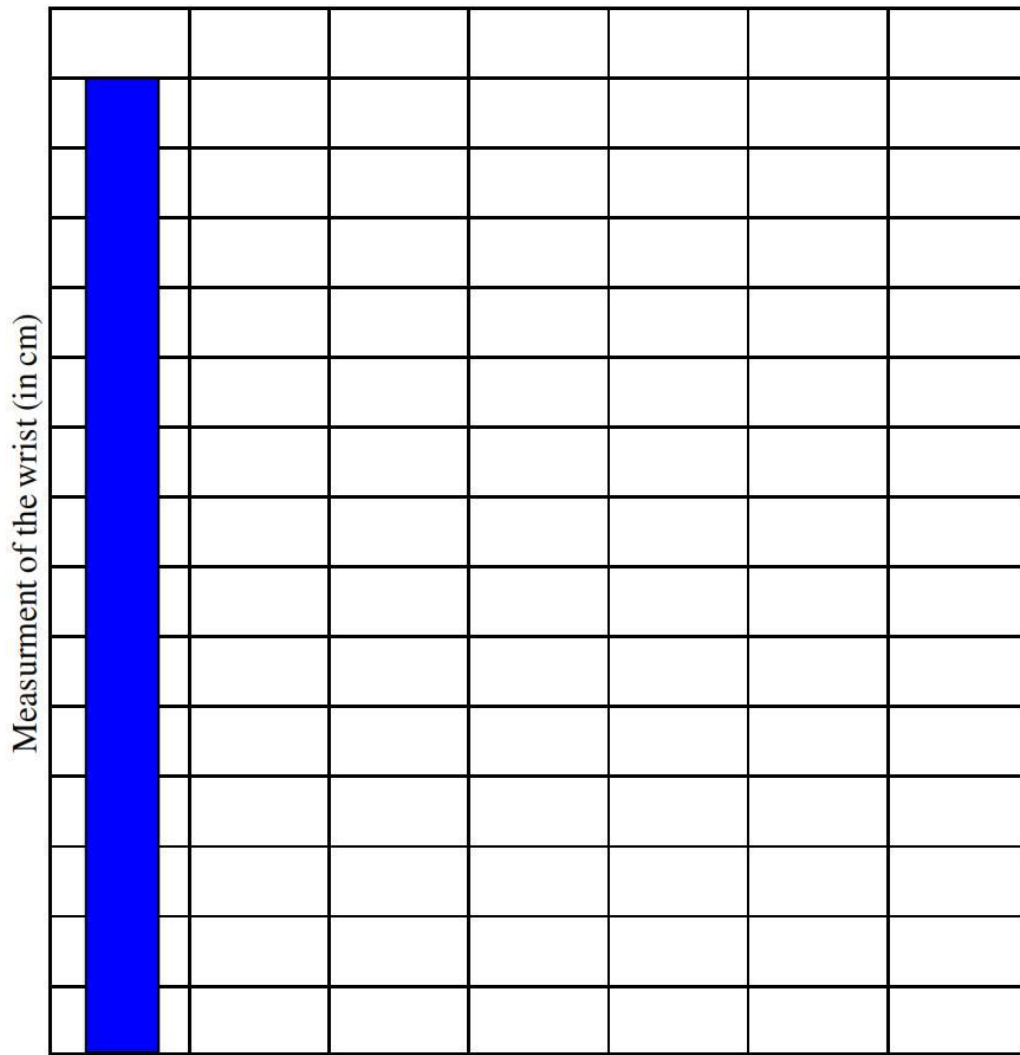
Fruits	Liked by number of students
Guava	<input type="checkbox"/> <input type="checkbox"/>
Banana	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Orange	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



## Mathematics - 4

**Measure of Wrist**

Sit with your friends. Now cut a strip of paper equal to your wrist and stick it on the bold line given below -



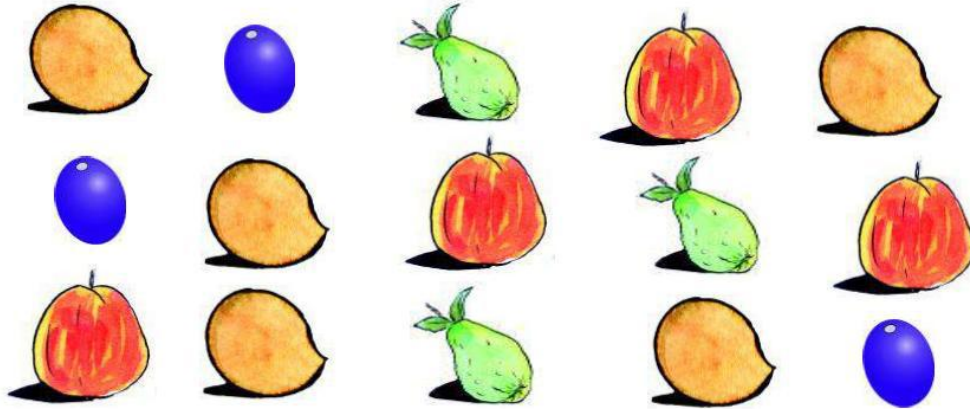
Rohit's  
strip

- Also tell whose strip is biggest, whose strip is the smallest and whose strips are equal.







## PICTORIAL REPRESENTATION OF DATA

Some pictures of fruits are given below -



Count the similar fruits and complete the table -

Fruits				
Count				

Now colour no of boxes equal to no of shapes.

No of fruits	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	mango	jamun	guava	apple

By colouring the boxes in this manner no of various shapes will be shown as rectangular stripes for each shape a box of equal length will be shown and the width of all the bars is equal.

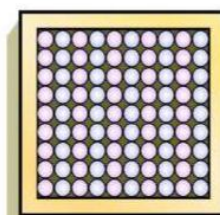
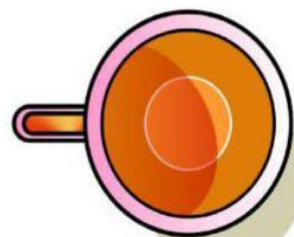
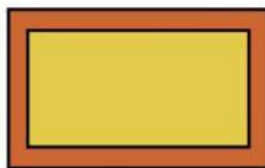
This kind of representation of information is called **Bar Diagram**

Mathematics - 4

## Unit 13

# HOW DO THINGS LOOK ?

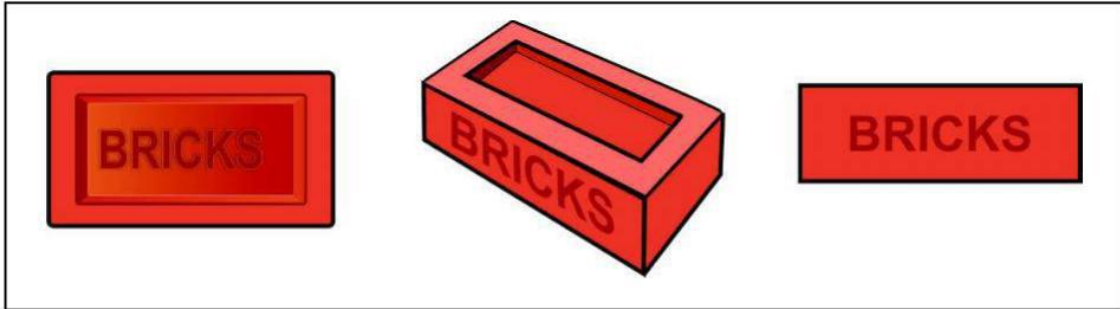
Look carefully the following pictures



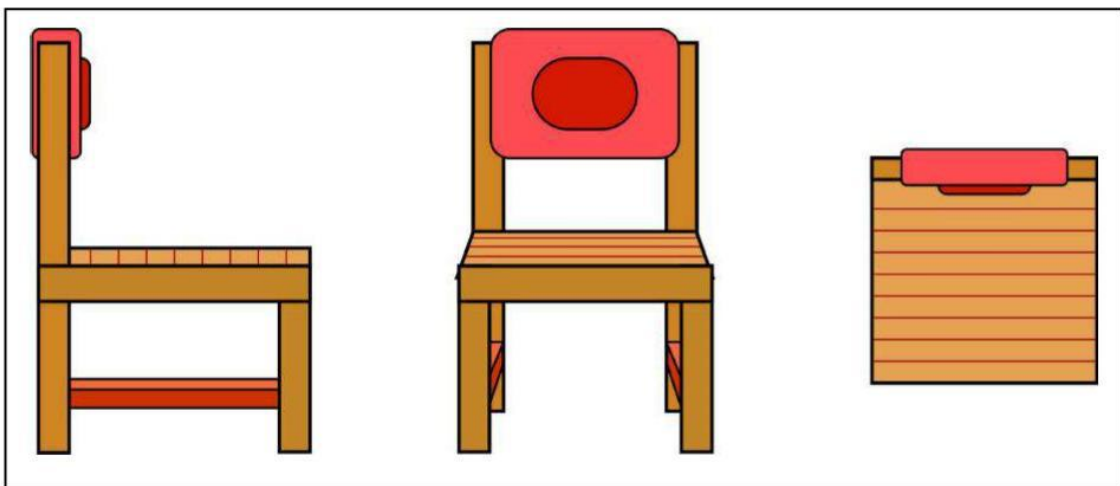
HOW DO THINGS LOOK ?

**Put a tick mark**

How wil the brick look from the top?



How wil the chair look from the frunt?



How wil the shoe look from the side?





## Mathematics - 4

### Now do it

Collect some objects like chappals, duster, plate, compass, eraser, bowl etc. Now put these objects one by one on the floor and observe their front view, top view and side view. Try to make their figures.

**How did the objects look from the front view? Draw the figures.**



**How did the objects look from the top view? Draw the figures.**



**How did the objects look from the side view? Draw the figures.**

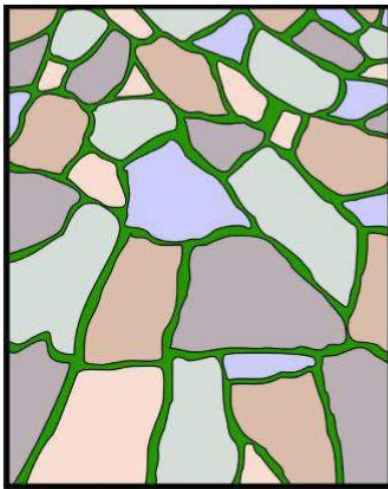


Is this any object which looks the same from all the sides?

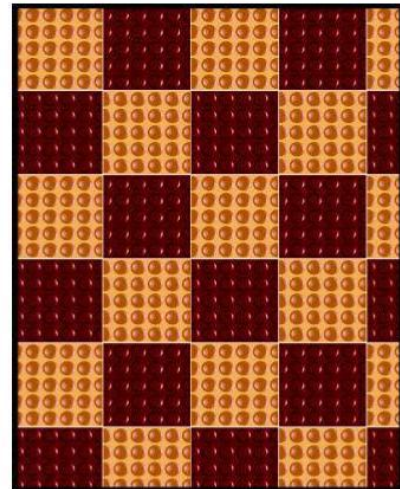
**Unit 14****PATTERNS & RIDDLES**

You must have seen tiles fixed on houses, footpaths, railway station, garden etc. In this unit we will see the different arrangements of tiles.

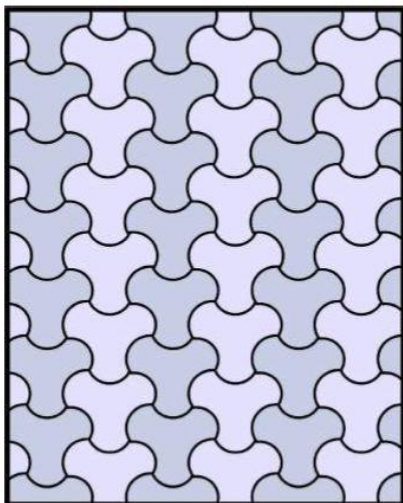
Tiles of different shapes-



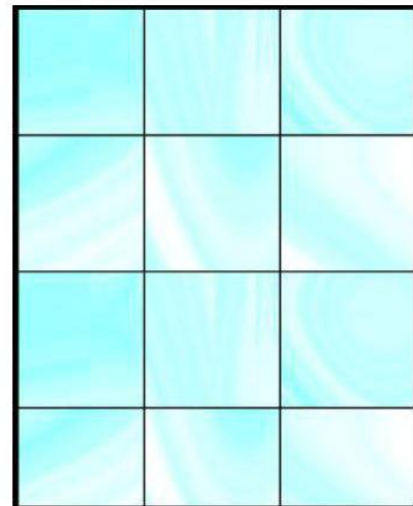
Tiles on the garden



Tiles on the railway station



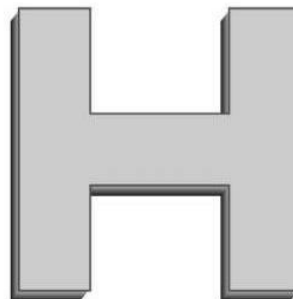
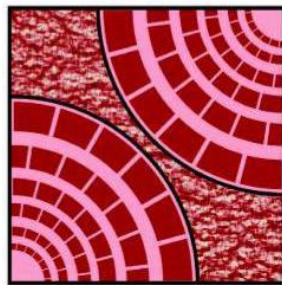
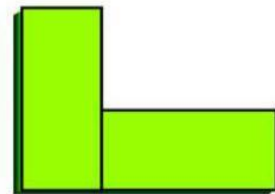
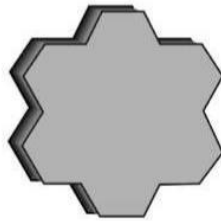
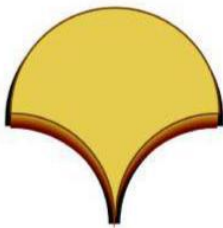
Tiles on the footpath



Tiles on the houses

Mathematics - 4

Tiles of different shapes-

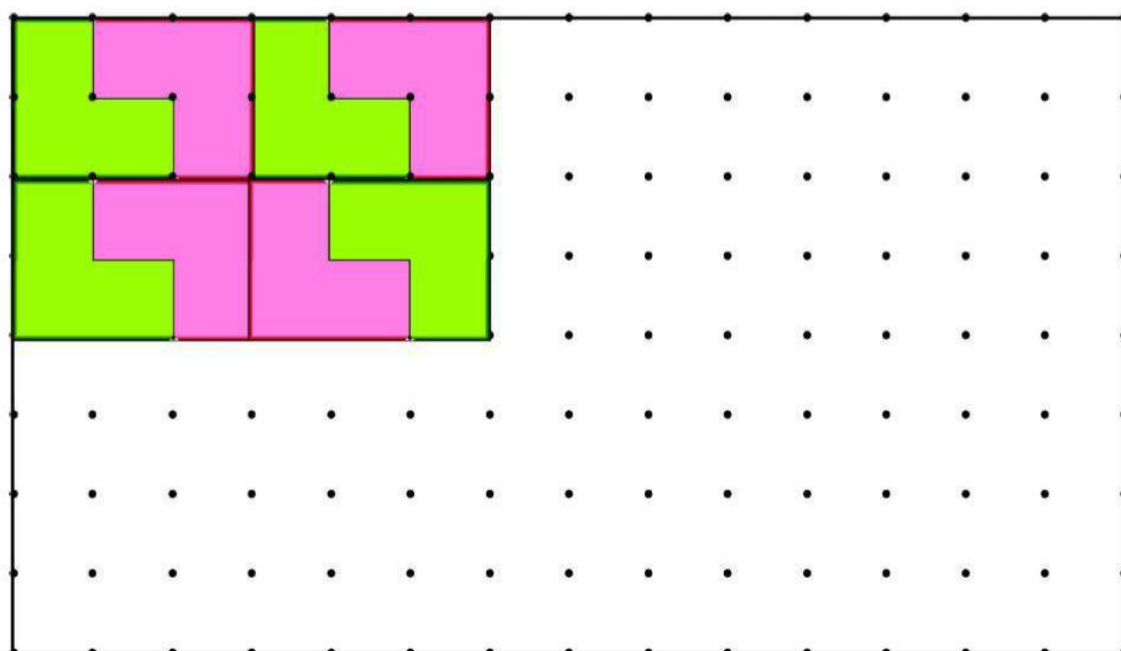
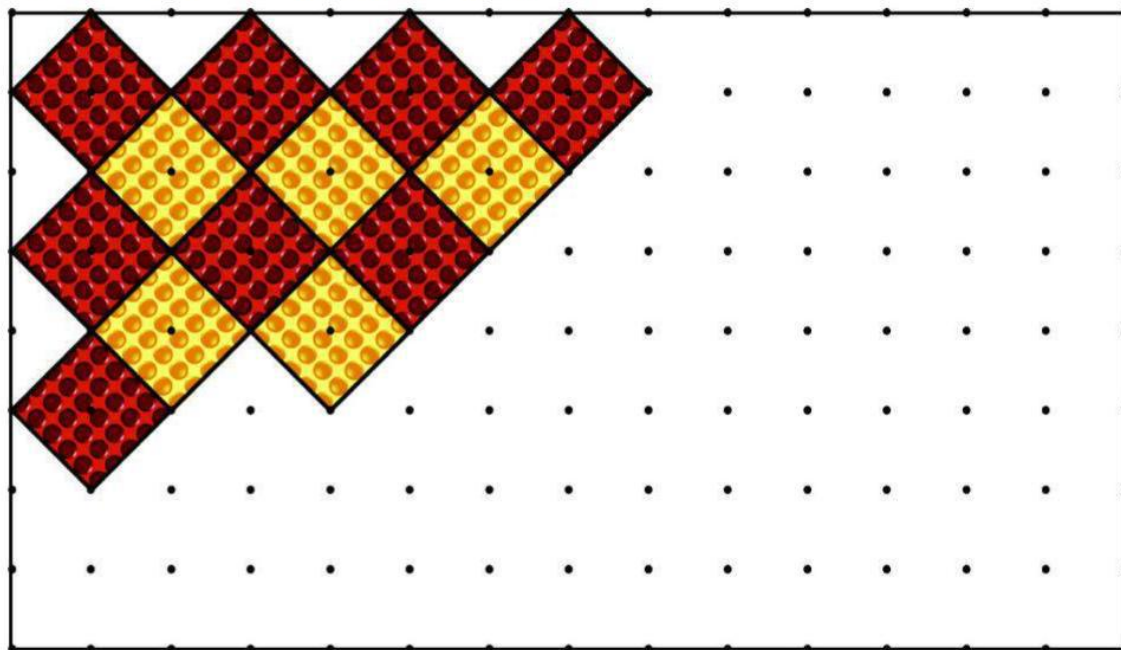




## PATTERNS &amp; RIDDLES

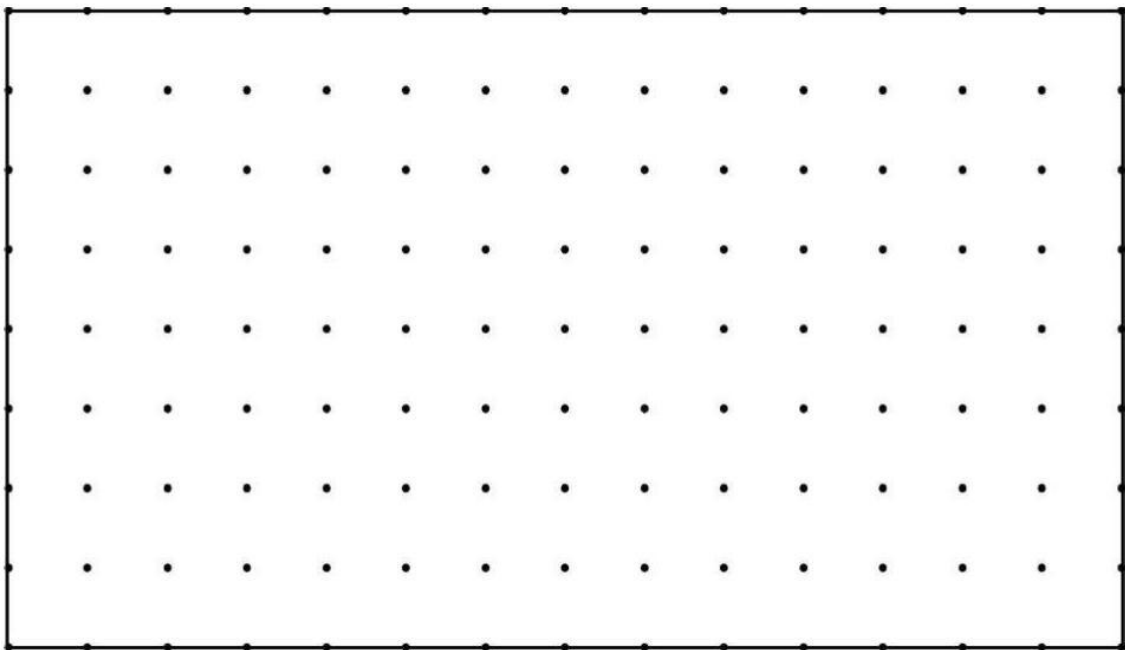
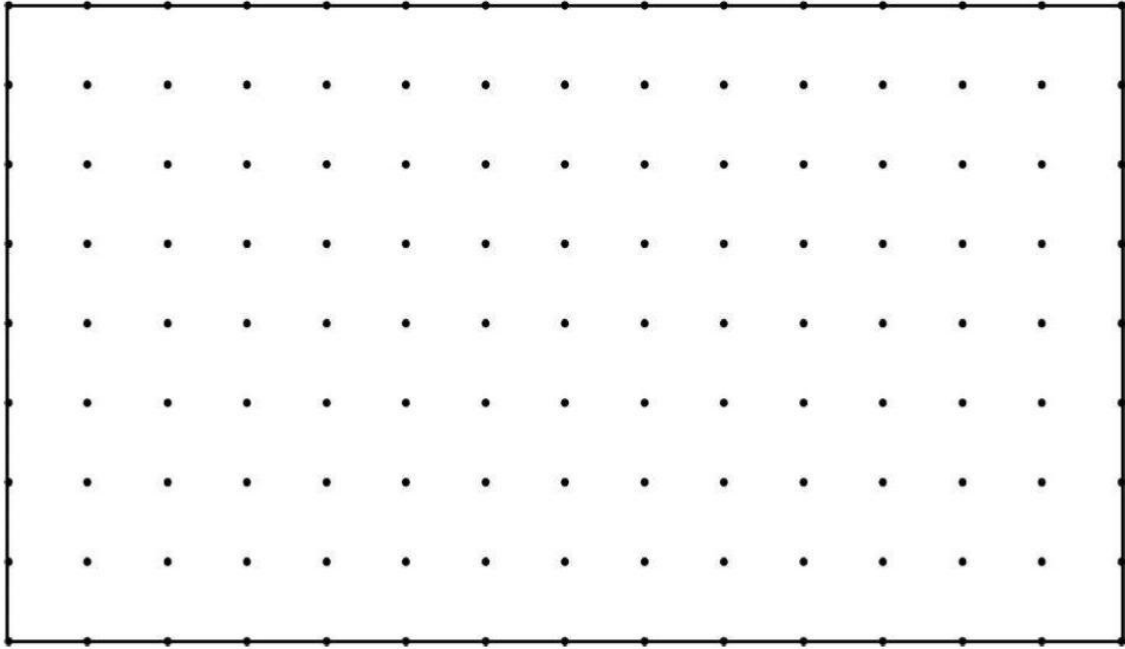
The tiles are fixed on floor in such a way that it cover the whole floor and no empty space is left.

Now you fill the floor with the given tiels.



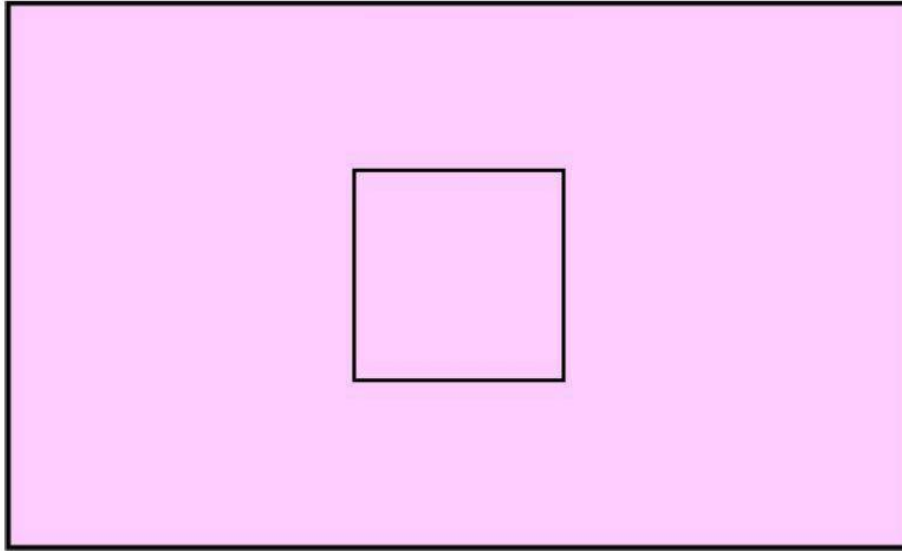
Mathematics - 4

**Make tiles of your choice and color them.**

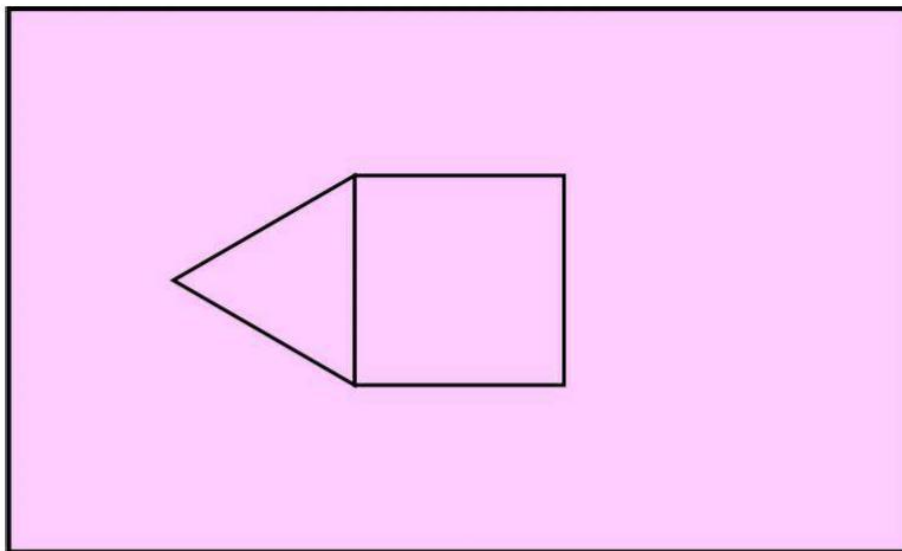


**Make your own tiels -**

**Take a piece of thick paper. Make a square of 3 c.m.**



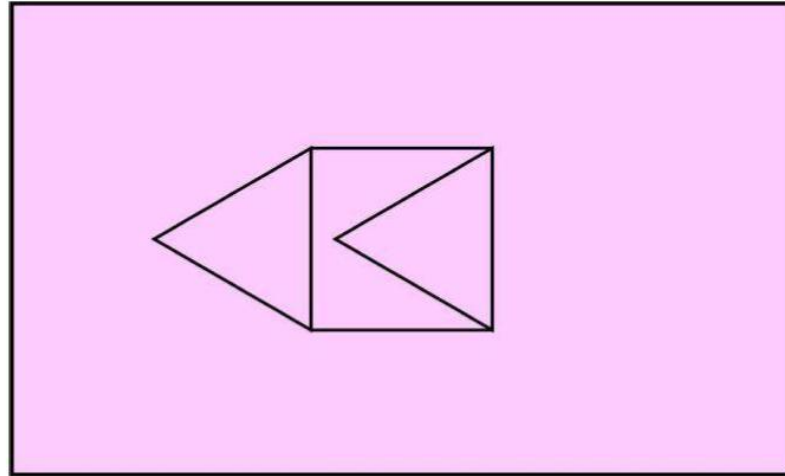
**Make a triangle on any of the sides of the square.**



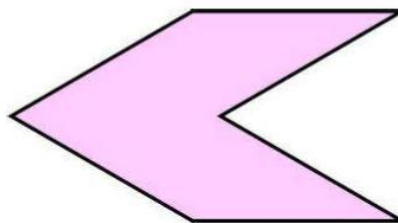


# Mathematics - 4

Make another triangle on the other side of the square with the same measurement.

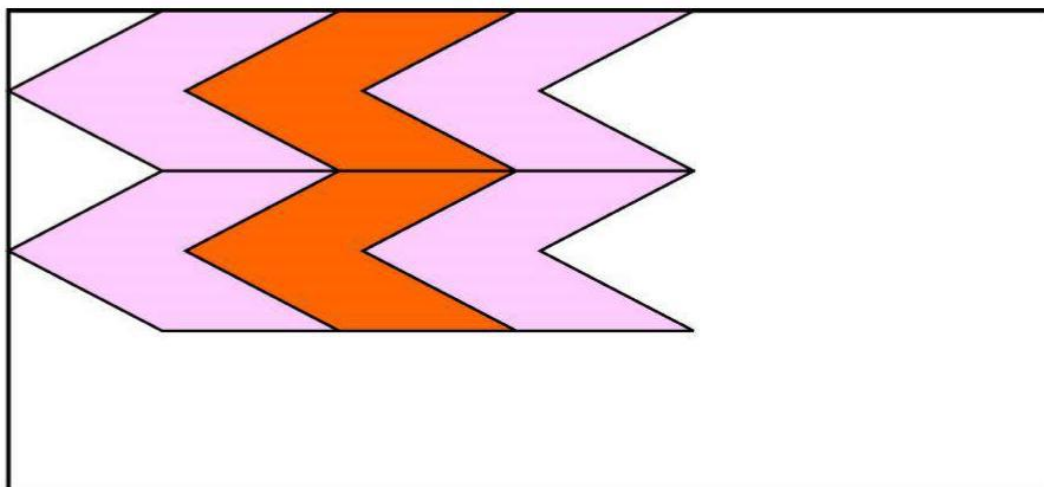


Now cut it, your tile is ready.



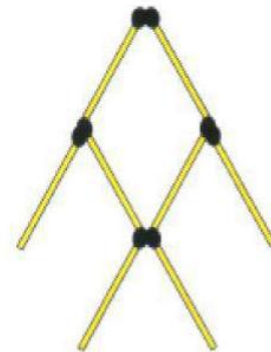
Keep this tile on the drawing sheet, page and make an outline using a pencil. Similarly make one after the other keeping in view that no empty space is left in between.

The pattern will look like this-

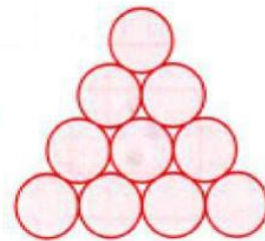


**RIDDLES**

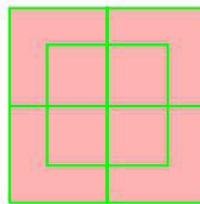
1. Make a shape with 8 match sticks as shown in the figure. Now change the position of three matchsticks in such a manner that the direction of the figure is reversed.



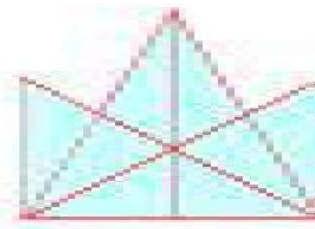
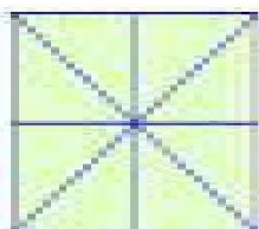
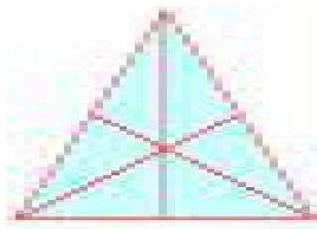
2. Change the position of 3 circles in such a way that the direction of the figure is reversed.



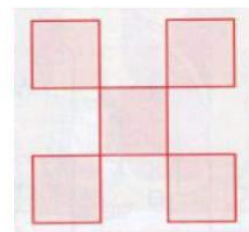
3. How many squares are there in the figure ?



4. Tell the number of triangles in each figure ?



5. 5 squares are there. Change the position of any four sides in such a way so that they become 7 squares.



## Mathematics - 4

6. Place 10 stones in five columns in such a way that 4 stones are there in each column.

In children's magazines such riddles are given. Solve them. You can also make riddles and give it to your friends to solve it.

**BRAIN EXERCISE**

What will be in the last box?

1. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
2. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
3. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
4. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
5. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
6. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
7. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
8. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
9. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---
10. 

			<div style="border: 1px solid black; width: 40px; height: 40px;"></div>
--	--	--	---



# OUR Devanagari Numerals

## Introduction and Exercises



## Our Numerals

Pihu's grandmother was doing some calculations on the table. Pihu looked her calculation but couldn't understand it, they seem to be some new digit to Pihu. She asked her grandmother about them.

१.	Sugar	१ Kg.	३५ Rupees
२.	Potato	३ Kg.	६० Rupees
३.	Onion	२ Kg.	२४ Rupees
४.	Soap	१ Pieces	१८ Rupees
५.	Oil	१ Litter	८५ Rupees
६.	Dal/ Pulses	१/ २ Kg.	३८ Rupees
७.	Salt	२ Packet	२० Rupees
Total :			२८० Rupees

Grandmother said that these are also numerals, we learnt mathematics with these numerals. Grandmother also showed Pihu a calendar with these numerals.

Pihu wanted to ask more about the numerals, but grandmother was busy for her work. So, she told Pihu to asked more about them from her teacher.

Next day Pihu asked more about the numerals to her teacher in the class. Teacher said—

“These are the numerals of Devanagari script.” These numerals are also used to write numbers.

These digits are like 0, 1, 2, 3, 4, 5, 6, 7, 8, & 9 which are just as to write numbers. In Devanagari digits these are written as ०, १, २, ३, ४, ५, ६, ७ ८ & ९



## Numbers

In order to write numbers we make use of numerals such as 0, 1, 2, 3,..... These are known as international numerals . We can also write numbers in the Devanagari numerals. Let us see the numerals as they are written in both the scripts :

International numerals	0	1	2	3	4	5	6	7	8	9
Devanagari numerals	०	१	२	३	४	५	६	७	८	९

The following table has numbers written in figures and in words. Learn to identify each number and read its name :

1	१	एक	26	२६	छब्बीस	51	५१	इक्यावन	76	७६	छिहत्तर
2	२	दो	27	२७	सत्ताईस	52	५२	बावन	77	७७	सतहत्तर
3	३	तीन	28	२८	अट्ठाईस	53	५३	तिरपन	78	७८	अठहत्तर
4	४	चार	29	२९	उनतीस	54	५४	चौवन	79	७९	उन्यासी
5	५	पाँच	30	३०	तीस	55	५५	पचपन	80	८०	अस्सी
6	६	छः	31	३१	इकतीस	56	५६	छप्पन	81	८१	इक्यासी
7	७	सात	32	३२	बत्तीस	57	५७	सत्तावन	82	८२	बयासी
8	८	आठ	33	३३	तैंतीस	58	५८	अट्ठावन	83	८३	तिरासी
9	९	नौ	34	३४	चौतीस	59	५९	उनसठ	84	८४	चौरासी
10	१०	दस	35	३५	पैंतीस	60	६०	साठ	85	८५	पच्चासी
11	११	ग्यारह	36	३६	छत्तीस	61	६१	इकसठ	86	८६	छियासी
12	१२	बारह	37	३७	सैंतीस	62	६२	बासठ	87	८७	सत्तासी
13	१३	तेरह	38	३८	अड़तीस	63	६३	तिरसठ	88	८८	अठासी
14	१४	चौदह	39	३९	उनचालीस	64	६४	चौंसठ	89	८९	नवासी
15	१५	पंद्रह	40	४०	चालीस	65	६५	पैंसठ	90	९०	नब्बे
16	१६	सोलह	41	४१	इकतालीस	66	६६	छियासठ	91	९१	इक्यानवे
17	१७	सत्रह	42	४२	बयालीस	67	६७	सड़सठ	92	९२	बानवे
18	१८	अठारह	43	४३	तैंतालीस	68	६८	अड़सठ	93	९३	तिरानवे
19	१९	उन्नीस	44	४४	चौवालीस	69	६९	उनहत्तर	94	९४	चौरानवे
20	२०	बीस	45	४५	पैंतालीस	70	७०	सत्तर	95	९५	पंचानवे
21	२१	इक्कीस	46	४६	छियालीस	71	७१	इकहत्तर	96	९६	छियानवे
22	२२	बाईस	47	४७	सैंतालीस	72	७२	बहत्तर	97	९७	सत्तानवे
23	२३	तेईस	48	४८	अड़तालीस	73	७३	तिहत्तर	98	९८	अट्ठानवे
24	२४	चौबीस	49	४९	उनचास	74	७४	चौहत्तर	99	९९	निन्यानवे
25	२५	पच्चीस	50	५०	पचास	75	७५	पचहत्तर	100	१००	सौ



**Maths-4**

**Raju and Chanda are also trying to know**

There are nine beads in the ones, tens and hundreds column of the abacus. In this way it exhibits the number nine hundred ninety nine. What will happen if one bead is increased in ones place.

If we try to put one more bead in the column of ones it will not come on it because only 9 beads can be there.



Then we have to vacate the ones columns, In place of these ten beads and put one bead in tens column.

But already there are nine beads in the tens column. So vacate the tens column and in place of these ten beads put one bead in hundreds column.

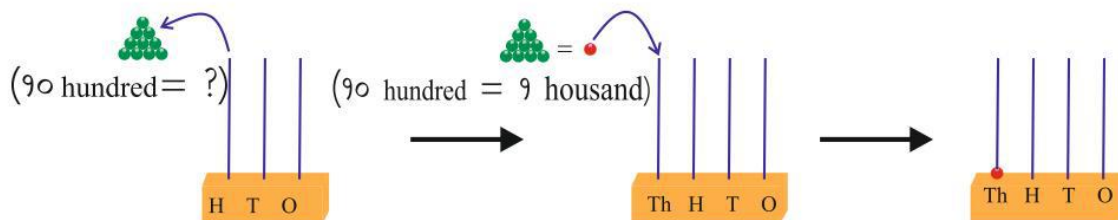


Oh , but already there are 9 beads in hundreds column. Now what to do?



Now tell what will Raju and Chanda do?

Vacate the hundreds column and in place of these nine beads we have to put one bead in next column. Thus we need a new column. This means a new place. This new place is called thousands. Therefore in place of ten beads of hundreds we put one bead in thousands column.



### Now answer

What will be the number if you add 9 with 999? .....

### In the same way

$$9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 = 90$$

i.e. ten ones = ..... ten

$$90 + 90 + 90 + 90 + 90 + 90 + 90 + 90 + 90 + 90 = 900$$

i.e. ten tens = .....hundreds

### In the same way

$$900 + 900 + 900 + 900 + 900 + 900 + 900 + 900 + 900 + 900 = 9000$$

Ten hundreds = \_\_\_\_\_ thousands

 Th H T O	 Th H T O	 Th H T O
3 9 8 2		
Three thousand one hundred forty two		

**Maths-4****Write the numbers in figures and words.**

१. ४३२१ .....
२. १२३४ .....
३. २२२२ .....
४. .... six thousand nine hundred fifty
५. ७०८९ .....
६. .... eight thousand six hundred two
७. .... nine hundred ninety
८. ३००७ .....
९. ५६७९ .....
१०. .... six thousand seven hundred sixty one

**Circle on the correct number**

Three thousand seven hundred fifty nine	७६९	३७५९	३९५७	३५७९
Five thousand three hundred twenty	५३०२	५२०३	५३२०	५०२३
One thousand two	१००२	१०२०	१२००	१०००
Six thousand ten	६००१०	६०१०	६१००	६००९
Two thousand three hundred sixty nine	२३६९	२९६३	२३७९	२३००६९
Four thousand two hundred ten	४०२१०	४२१०	४०१२	४०१२०



## Match the columns

$$1. 9238 = 9\text{Th.} + 2\text{H.} + 3\text{Tens} + 8\text{Ones} = 9000 + 200 + 30 + 8$$

$$2. 2830 = \quad + \quad + \quad + \quad = \quad + \quad + \quad + \quad$$

$$3. \dots\dots\dots = \quad + \quad + \quad + \quad = 3000 + 900 + 0 + 2$$

$$4. \dots\dots\dots = 6\text{Th} + 0\text{H.} + 7\text{Tens} + 7\text{Ones} = \quad + \quad + \quad + \quad$$

$$5. \dots\dots\dots = \quad + \quad + \quad + \quad = 4000 + 800 + 0 + 0$$

$$6. \dots\dots\dots = 5\text{Th.} + 0\text{H.} + 0\text{Tens} + 9\text{Ones} = \quad + \quad + \quad + \quad$$

## Match the columns

$$1. 8306 \quad 4000 + 0 + 60 + 9$$

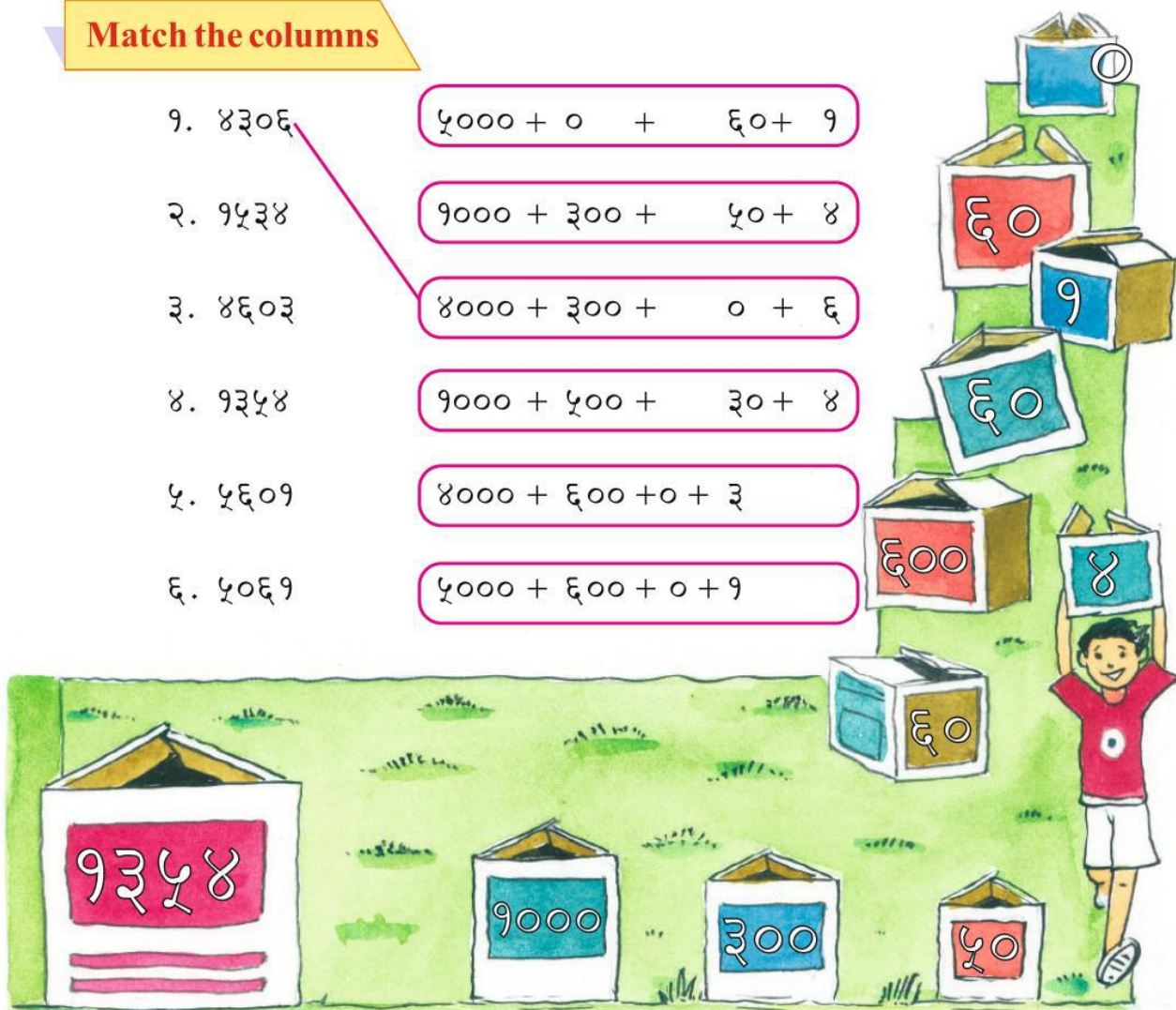
$$2. 9438 \quad 9000 + 300 + 40 + 8$$

$$3. 8603 \quad 8000 + 300 + 0 + 6$$

$$4. 9348 \quad 9000 + 400 + 30 + 8$$

$$5. 4609 \quad 8000 + 600 + 0 + 3$$

$$6. 4069 \quad 4000 + 600 + 0 + 9$$



**Maths-4****Complete the series**

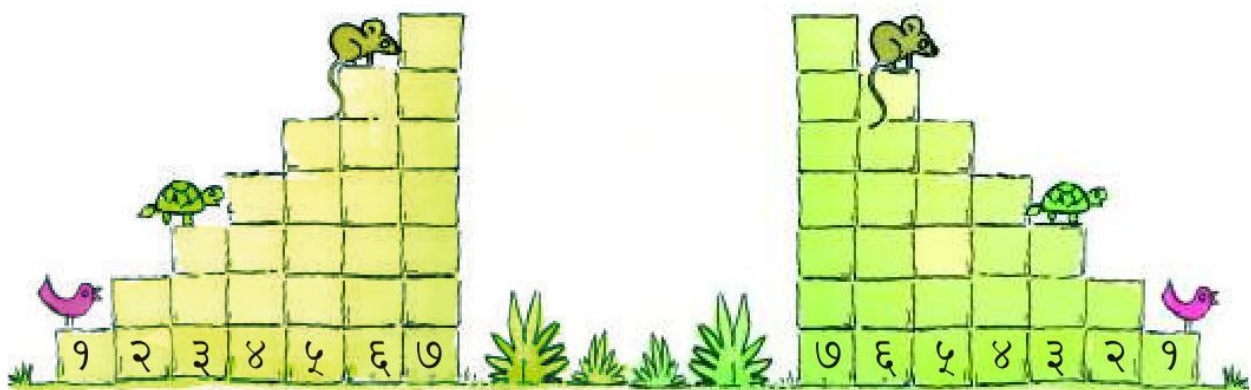
୧. ୨୨୦୭, ....., ୨୨୦୬, ....., ୨୨୨୨, .....

୨. ୨୦୩, ୩୦୩, ୪୦୩, ....., ....., .....

୩. ୨୩୬୬, ....., ୨୪୦୨, ....., .....

୪. ୭୫୫, ୭୪୫, ୭୩୫, ....., ....., .....

୫. ୬୬୬, ୮୮୮, ୭୭୭, ....., ....., .....

**Write the greater number**

୧. ୫୩୩୬ and ୨୩୩୬

୨. ୨୨୩୫ and ୨୨୫୫

୩. ୨୫୨୩ and ୨୩୨୩

୪. ୩୪୨୭ and ୩୩୪୭

**Greater number**

**How do you come to know?**

### Find out the wrong statement and right statement. Correct the wrong statement

**For example:**  $୫୩୫୬ > ୪୨୨୩ > ୩୯୨୫ > ୨୯୯୯$  (right)

୧.  $୨୫୨୫ < ୫୨୫୨ < ୬୩୪୫ < ୭୨୩୫$  ( ) .....

୨.  $୨୨୩୯ < ୨୦୪୨ < ୨୦୪୩ > ୨୦୫୨$  ( ) .....

୩.  $୮୯୭୬ < ୮୭୯୬ > ୭୩୨୨ > ୫୪୩୨$  ( ) .....

୪.  $୫୬୦୨ < ୬୫୨୦$  ଓ  $୭୩୪୫ < ୮୩୪୨$  ( ) .....

୫.  $୪୨୫୯ < ୫୯୪୨ > ୬୭୨୪ > ୯୨୪୩$  ( ) .....

Select any five numbers. Arrange them in descending order first and then in ascending order using lesser than or greater than sign.

### Without repeating the numbers read and write as many numbers as you can

୧. Make two digit numbers with ୩ and ୮ and read -

.....

୨. Make two digit number with ୨ and ୪ and read -

.....

୩. Make three digit number with ୨, ୨ and ୪ and read -

.....

୪. Make three digit number with ୫, ୬ and ୦ and read -

.....

୫. Make four digit numbers with ୩, ୪, ୭ and ୯ and read -

....., ....., ....., ....., ....., .....

....., ....., ....., ....., ....., .....

....., ....., ....., ....., ....., .....

....., ....., ....., ....., ....., .....

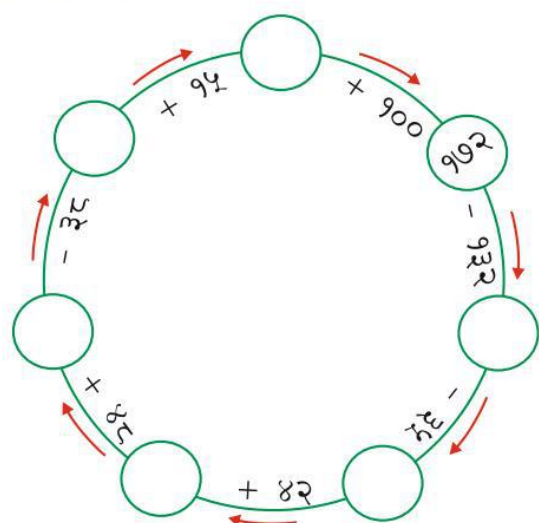
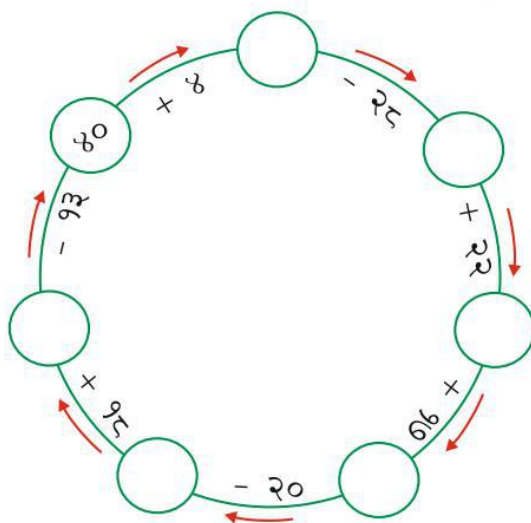
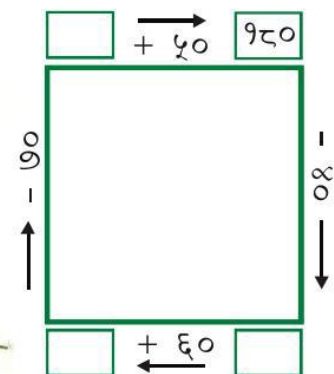
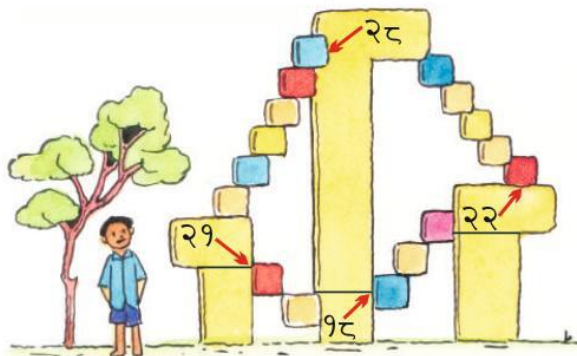
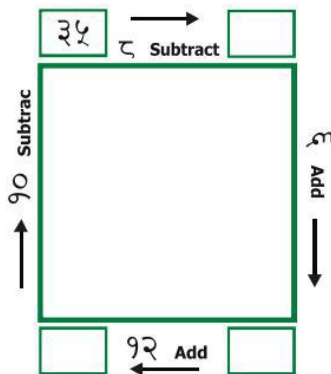
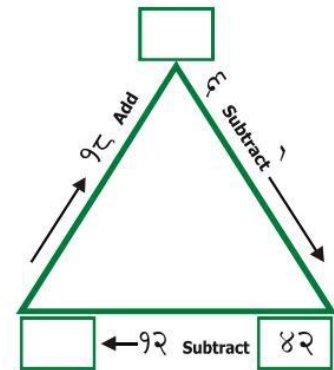
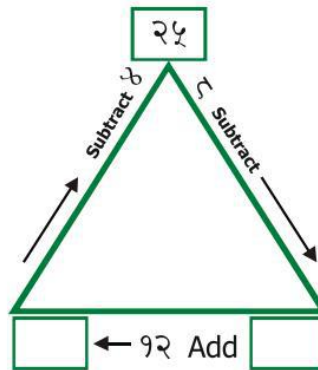
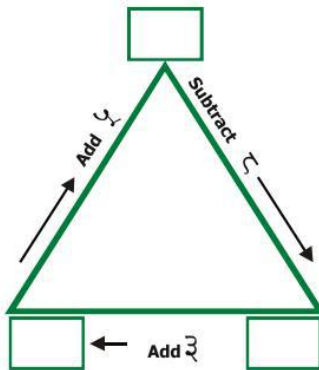




## Maths-4

## Addition &amp; Subtraction

Write numbers in the boxes as shown.



Understand the pattern and proceed

$$\begin{aligned} 9 + 2 + 3 &= 6 \\ 2 + 3 + 8 &= 6 \\ 3 + 8 + 4 &= 92 \end{aligned}$$


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$$\begin{aligned} 9 + 2 + 3 &= 6 \\ 8 + 4 + 6 &= 94 \\ 9 + 2 + 3 &= 28 \end{aligned}$$


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$$\begin{aligned} 2 + 8 + 6 &= 92 \\ 2 + 90 + 92 &= 30 \end{aligned}$$


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$$\begin{aligned} 9 + 3 + 4 &= 6 \\ 9 + 6 + \dots &= \end{aligned}$$

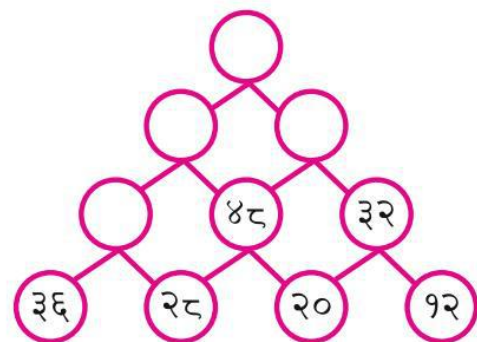
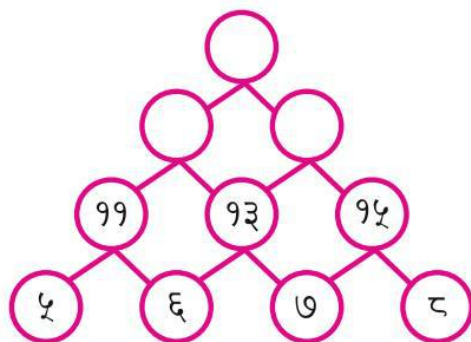

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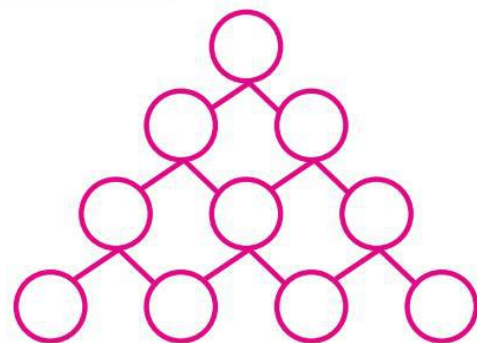
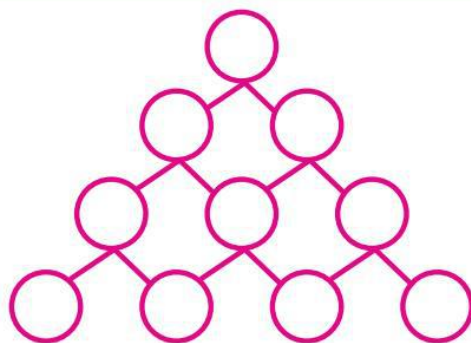
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In the same way you also make two patterns



**Maths-4****Number game**

Select any number from the table. Do calculation using other numbers from the table to get the number you have selected :

୪୩	୨୨	୬୯	୫	୫୨	୮୫
୨୪	୪୫	୬୪	୪୯	୩୬	୫୯
୨୬	୨୫	୨୦	୨୯	୭୩	୩୪
୨୪	୬	୭	୨୮	୫୨	୩୨
୩୮	୨୩	୨୨	୪୩	୪	୬୦
୭୯	୯୦	୩୨	୨୭	୯	୪୦

By selecting the number ୬୪ you find the number in this way:

$$୬୦ + ୪ = ୬୪,$$

$$୭୩ - ୯ = ୬୪,$$

$$୬୯ - ୫ = ୬୪$$

- Add numbers the result of which will be ୩୪.
- Subtract numbers the result of which will be ୩୪.

**Some answers are given below. Form questions from these numbers**

- Answer is ୩୫
- Answer is ୪୪
- Answer is ୨୨
- Answer is ୨୨

If the answer is ୨୮ then the question may be as follows

- What will you get by adding ୯ to ୯ ?
- One basket carries ୯ mangoes. How many mangoes will be there in such two baskets?
- What is the answer of ୨୫-୭ ?
- What is two times of ୯ ?
- $୯ \times ୨ = \dots\dots\dots$

**Add and subtract in the following boxes**

+	୭୩୨	୬୦୫	୬୨୫
୨୨୦	୯୪୨		
୩୨୮			
୬୦୫			

-	୮୮୨	୭୦୦୫	୬୩୮୨
୬୨୩		୬୩୯୨	
୭୮୦			
୨୦୩			



## Addition of numbers having 3 digits

Example :

Add 989, 253 and 267

H.	T.	O
	9	
9	8	9
+ 2	5	3
+ 2	6	7
		7

H.	T.	O
9	9	
9	8	9
+ 2	5	3
+ 2	6	7
	6	7

H.	T.	O
9	9	
9	8	9
+ 2	5	3
+ 2	6	7
6	6	7

## Brief form

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

Solve these

9.

9	2	9
+ 2	9	0
+ 2	8	2

2.

9	2	8
+ 2	6	9
+ 9	9	3

3.

9	8	5
+ 2	8	6
+ 9	3	2

8.

9	9	5
+ 9	0	6
+ 9	0	3

**Maths-4****Solve these**

$$\begin{array}{r} 9. \quad 8375 \\ + 2796 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 5937 \\ + 2595 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 3895 \\ + 3679 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 6386 \\ + 272 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 3836 \\ + 207 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 5975 \\ + 3592 \\ \hline \end{array}$$

$$9. \quad 9293 + 2579$$

$$7. \quad 9999 + 9999$$

$$8. \quad 5975 + 3922$$

$$10. \quad 8989 + 8363$$

$$99. \quad 675 + 8697$$

$$92. \quad 9992 + 637$$

**The subtraction of 4 digit number**

**Example:** Subtract 6753 from 9879

T.	H.	T.	O
<del>9</del>	<del>8</del>	<del>7</del>	9
- 6	7	5	3
9	8	9	8

**Solve these**

$$\begin{array}{r} 9. \quad 5097 \\ - 2978 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 9779 \\ - 2503 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 5692 \\ - 3280 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 3563 \\ - 2906 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 6230 \\ - 2859 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 2507 \\ - 9352 \\ \hline \end{array}$$

$$9. \quad 5683 - 2958$$

$$7. \quad 6638 - 5099$$

$$8. \quad 5000 - 2550$$

$$10. \quad 9999 - 5222$$

$$99. \quad 8888 - 2965$$

$$92. \quad 7900 - 9777$$

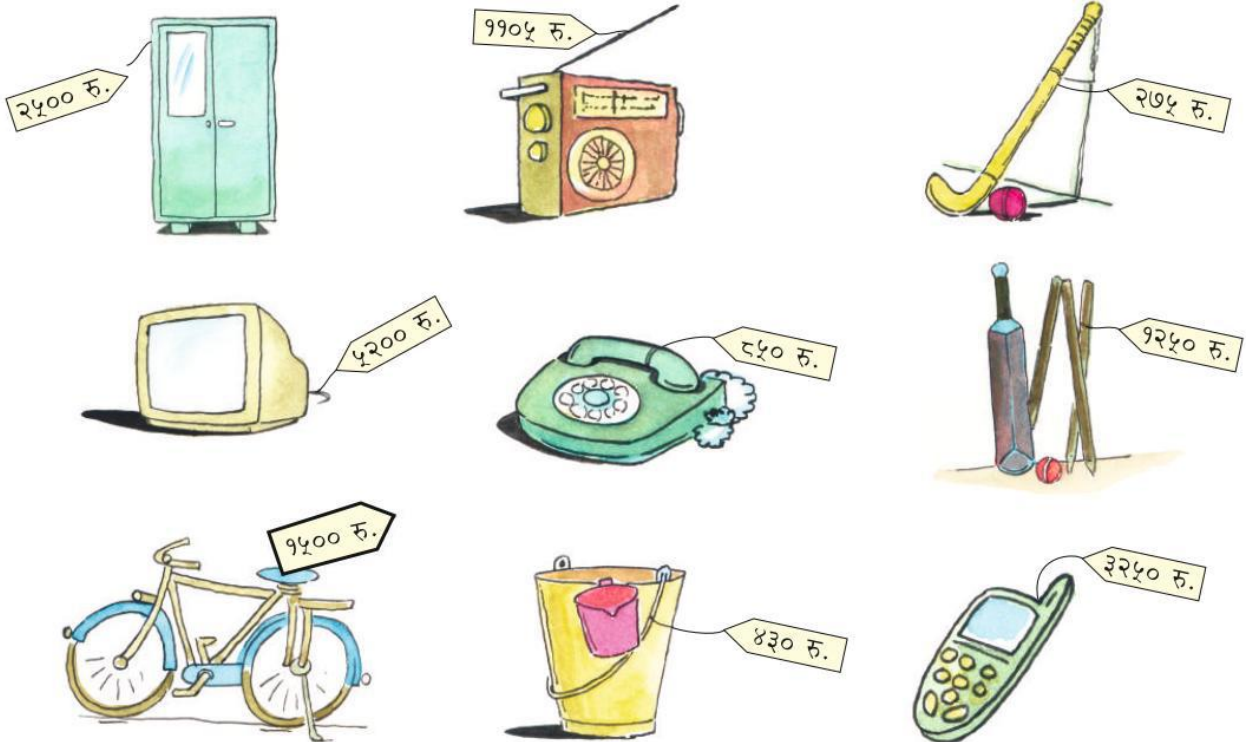
**Addition & Subtraction**

୨. Government Primary School Bijarbhantha got ୫୩୫ Hindi books, ୪୨୨ Maths books and 138 books of English. How many total books the school got?
୩. From two farms of papaya, plucked ୩୫୪ and ୨୫୫ papayas respectively. Tell how many more papayas were plucked from first farm than second farm?
୪. ୨୩୩ children go to school from higher colony and ୮୭ from lower colony. How many more kids go to school from higher colony as compared to lower colony?
୫. ୪୫୩, ୩୩୮ and ୪୮୫ fishes were caught from a pond of Temari. How many fishes were caught in all?
୬. Population of Shankarpur is ୮୨୭୬. If ୪୨୩୩ of them are men, then how many are women?
୭. A refrigerator costs ୮୭୬୦ rupees, meanwhile the same refrigerator costs ୭୬୬୦ rupees in another shop. Tell the difference in the cost of fridge from the two shops?



**Maths-4**

See the picture and say who has spent how much money to purchase things at the following price :



Harpal purchased cycle and T.V.

(       )

Dinesh purchased bat ball, radio and mobile.

(       )

Raju purchased bucket, mug, almirah and telephone.

(       )

Salma purchased hockey stick, radio and mobile.

(       )

Reeti purchased bucket, mug, radio and almirah.

(       )

If every person has Rs. 9,500 then what amount of money would be left with each one?

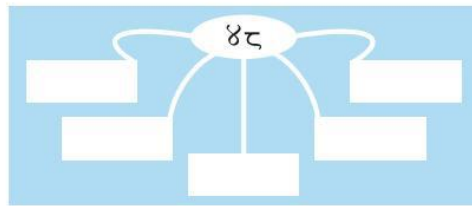
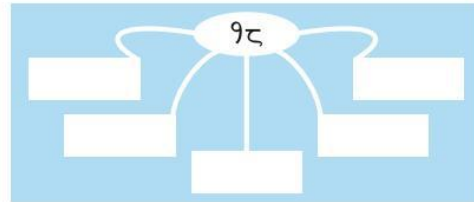
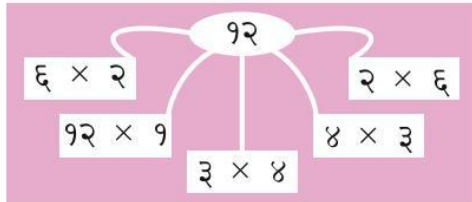
**Now tell**

१. Who has spent more: Harpal or Dinesh ?
२. Who has spent more: Dinesh or Reeti ? By how much ?
३. What is the total amount spent by Raju and Salma both?
४. How much less was spent by Salma than Harpal ?

Now you ask your friends about their favourite things and find out their cost.

# Multiplication

## Form question from the given answer



## Game of tables (Tables game)

If you know the tables from one to ten then you can form tables beyond ten: Let us develop table of 93 :-

Table of 90	90	20	30	40	50	60	70	80	90	100
Table of 3	3	6	9	12	15	18	21	24	27	30
Table of 93	93	26	39	52	65	78	91	104	117	130

To form table of 93 first we wrote table of 90 and then table of 3 then added them and we get the table of 93,  $90 + 3 = 93$  what will happen if we add tables of 9 and 6?

Let us do and observe :

Table of 9	9	18	27	36	45	54	63	72	81	90
Table of 6	6	12	18	24	30	36	42	48	54	60
Table of 93	93	....	....	....	....	....	....	....	....	....

Do you get the table of 93?

Can you develop the table of 93 by using other numbers? Which are those numbers??

1. ...., ....

2. ...., ....

3. ...., ....

4. ...., ....

You have already formed table of 93 In the same way develop tables of 99, 92, 98.

.....20.

**Maths-4****Some more sums**

१. In a garden there are ७ rows. In each row १५ rose plants are planted. How many total rose plants are there?
२. There are २५ oranges in a basket. How many oranges will come in such ५ baskets?
३. A tailor stitches १२ shirts in one day. How many shirts does he stitch in ४ days?

You should try some more such problems and solve it in different ways. Try at least ४ & ५ processes for each problem.

**How to solve?**

In previous class you solved problems like  $३४ \times ७$ ,  $१२६ \times २$

Now we will see  $३२ \times १६$

$$\begin{array}{r}
 9 \\
 32 \\
 \times 16 \\
 \hline
 192 \quad (32 \times 6) \\
 + 320 \quad (32 \times 10) \\
 \hline
 512
 \end{array}$$

Whenever you multiply a number with some two digits number, first you multiply ones number.

In this number ones digit is 6 therefore  $32 \times 6 = 192$

Now the second digit, 1 tens i.e. 10 is multiplied by 32  
 $32 \times 10 = 320$  Now you add both (192 + 320). The answer will be 512.

There is one more process for multiplication

We can write it  $32 = 30 + 2$  &  $16 = 10 + 6$

×	30	2
10	$30 \times 10$ 300	$2 \times 10$ 20
6	$30 \times 6$ 180	$2 \times 6$ 12

Now add all the four numbers.

$$300 + 180 + 20 + 12 = \text{-----}$$

Is the answer the same as it was in previous process?

Now solve the sums given below in both the processes :

१.  $४५ \times २३$

२.  $६५ \times ८६$

३.  $६७ \times ७२$

४.  $५७ \times ६६$

५.  $३० \times २६$

६.  $१५ \times ४६$



**Observe and understand**

$$\begin{array}{r}
 386 \\
 \times 25 \\
 \hline
 1930 \quad (386 \times 5) \\
 + 6420 \quad (386 \times 20) \\
 \hline
 7650
 \end{array}$$

$386 \times 25 = ?$  other process to solve it

$$386 = 300 + 80 + 6 \text{ \& } 25 = 20 + 5$$

$\times$	300	80	6
20	$300 \times 20$ 6000	$80 \times 20$ 1600	$6 \times 20$ 120
5	$300 \times 5$ 1500	$80 \times 5$ 400	$6 \times 5$ 30

Thus  $386 \times 25 = 6000 + 1500 + 1600 + 400 + 120 + 30$

Or  $386 \times 25 = 7650$

**Solve these**

1.  $932 \times 45$

2.  $865 \times 32$

3.  $292 \times 89$

4.  $429 \times 66$

5.  $960 \times 95$

6.  $203 \times 85$

**Problem Sums**

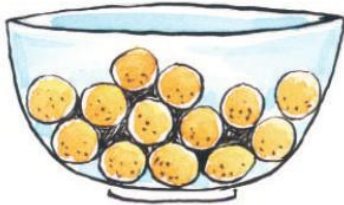
- There are 65 students in a school. Each deposited Rs 95 for picnic. What is the total amount deposited?
- Radha is in need of 98 copies. If each copy costs Rs. 96. How much money does Radha require?
- In a small box 92 ice cream cups can be kept. In a big box 95 times more icecream cups can be kept. Answer how many icecreams can be kept in big box?
- A saree has 25 different designs. Every design has 96 colours. A shopkeeper wants to purchase one piece of each type of saree for his shop. How many sarees the shopkeeper has to purchase for shop?
- One chair costs Rs. 836. What will be the cost of 35 chairs?
- Ramesh went to the market with Rs. 3000. He purchased 92 sets of books at the rate of Rs. 995. How much money is left with him?

## Maths-4

## Division

## Remainder

Can 93 sweets be divided equally among 8 children.



$$\begin{array}{r} 3 \\ 8 \overline{)93} \\ \underline{92} \\ 1 \end{array}$$

You know:

Here 8 divisor

93 dividend

and 3 quotient

This means that when 93 sweets were distributed equally among 8 children then each child got 3 sweets and one sweet was left. Here remainder = 1.

Remainder = 1

Now solve the questions given below.

1.  $25 \div 8$

2.  $35 \div 6$

3.  $53 \div 7$

4.  $7 \overline{)52}$

5.  $5 \overline{)353}$

6.  $3 \overline{)658}$

7.  $78 \div 8$

8.  $85 \div 9$

9.  $59 \div 6$

Write the divisor, dividend, quotient and remainder separately. Write the questions, which have a remainder of '0' in your copy and make a problem sum of these question. Two problem sums are given here—

1.  $25 \div 8$

The teacher took out 25 books and distributed them equally among 8 children. Tell how many books each child would get and how many books would be left.

2.  $3 \overline{)658}$

The cost of 3 chairs is Rs 658. Then what is the cost of one chair?

## Make questions and solve

$878 \div 8$

The cost of 8 sarees .....

.....

## How to solve

$$\begin{array}{r}
 3 \\
 92 \overline{) 302} \\
 - 36 \quad (92 \times = 36) \\
 \hline
 92 \\
 - 92 \\
 \hline
 0
 \end{array}$$

You have already done division in previous classes. Can you tell  $302 \div 92 = ?$

Here 302 is to be divided by 92. You can not distribute

3 hundreds into 92 parts. So convert 3 hundreds into tens

In this way 30 tens + 2 Tens makes 32 tens.

What will be the divisor of 32 by 92 Let us read

$$92 \times 9 = 92$$

$$92 \times 2 = 28$$

$$92 \times 3 = 36$$

$$92 \times 4 = 48$$

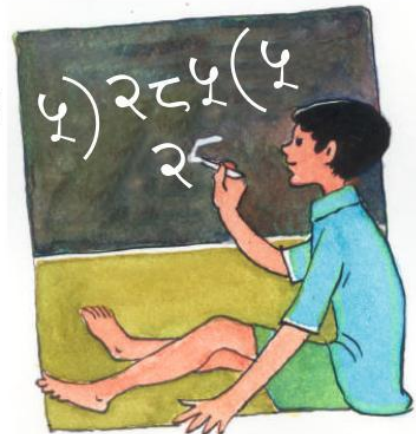
48, is greater than 32. So we read table of 92 only three times and subtract 36 from 32. 9 tens will be remainder which we convert into ones. In this way 90 + 2 = 92 Ones

Now dividing 92 by 92 is equal to 9.

This can also be done in this way:

$$\begin{array}{r}
 20 + 5 + 6 \\
 92 \overline{) 300 + 2} \\
 - 280 \quad (92 \times 20) \\
 \hline
 20 \\
 - 20 \quad (92 \times 5) \\
 \hline
 00 \quad 92 \\
 - 92 \quad (92 \times 6) \\
 \hline
 00
 \end{array}$$

$$20 + 5 + 6 = 31$$



## Now solve these questions

- One rope is 92 m long. If we cut the rope into pieces of 92 meter each. How many pieces can be cut?
- One box contains 92 bottles. Then how many bottles will be there in 92 boxes?



**Maths-4****Multiplication & Division**

୧. A halwai takes out ୨୨ Jalebis at a time. How many Jalebis will he takes out in ୫ times?
୨. A bowl has ୨୫ Jamun. How many Jamuns will have in ୫ such bowls?
୩. A fisherman makes ୫ nets in a month. So how many nets he will make in ୮ months.
୪. One shop have different ୨୪ designs of caps. Each design has ୨୫ colours. A shopkeeper wants to buy cap of every design. How many number of caps he has to buy.
୫. ୫୪ students are there in Primary Government School Dongripali. Each student deposit ୨୪ rupees for picnic. Tell the total amount deposited.
୬. A basket has ୨୫୨ berries. These berries has to divide among ୨୮ people. How many berries each people get?
୭. ୨୨ girls of Primary Government School gets Rs. ୫୦୦ in total, as the scholarship. Now calculate how much amount each girl get?
୮. From a pond, ୫୦ fisherman collected ୨୨୫୦ fishes. So how many fishes each fisherman get?