

THE WORLD OF MATHS

Part-3

Textbook of Mathematics for Class 5



For Free Distribution in All Government Schools



Rajasthan State Council of Educational
Research and Training, Udaipur



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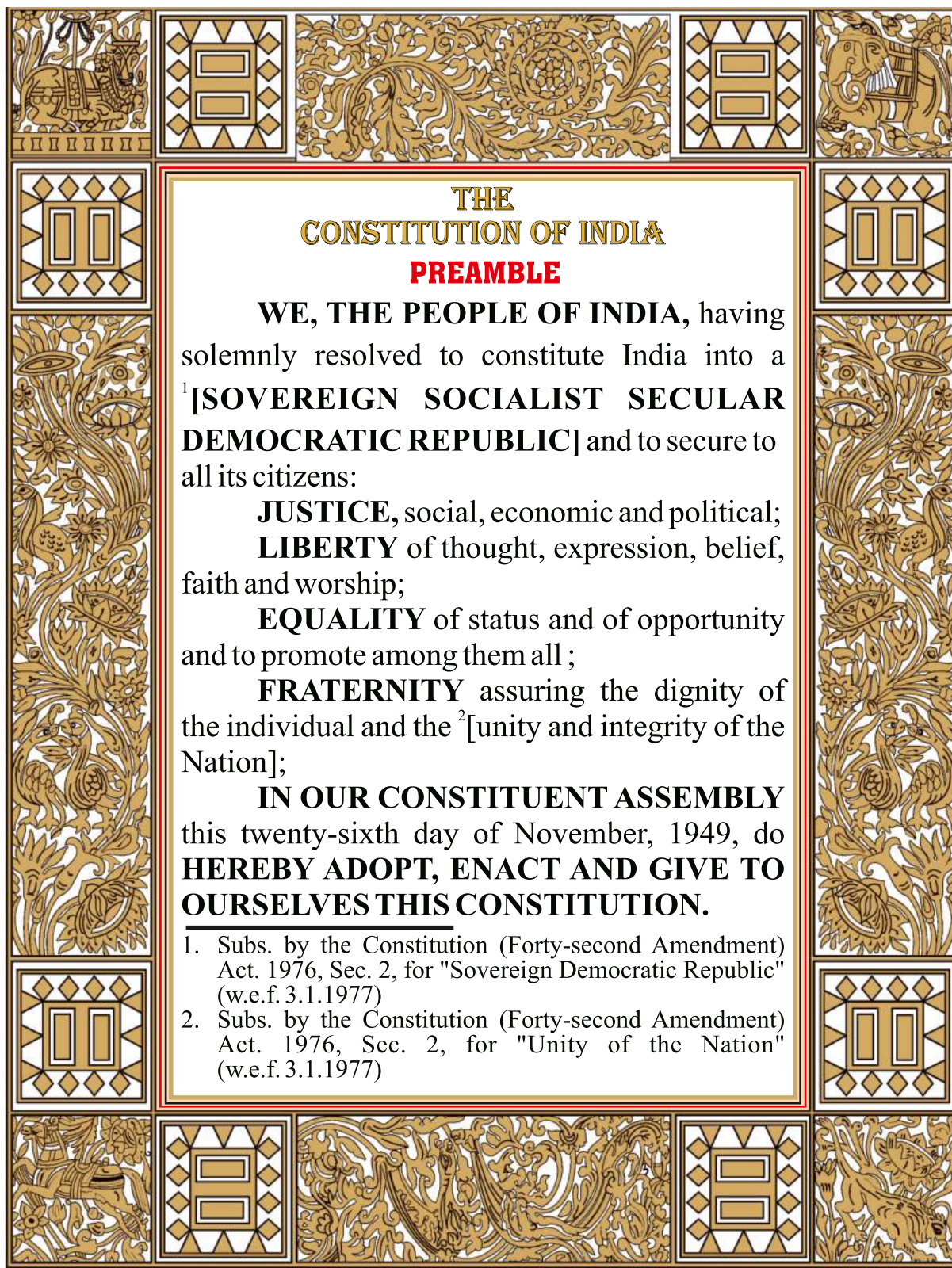
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**Special Note: The material compiled in this book is influenced by
several sources and we express our gratitude to all of them.**



**THE
CONSTITUTION OF INDIA
PREAMBLE**

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a¹**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens:

JUSTICE, social, economic and political;
LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity and to promote among them all ;

FRATERNITY assuring the dignity of the individual and the²[unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act. 1976, Sec. 2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act. 1976, Sec. 2, for "Unity of the Nation" (w.e.f. 3.1.1977)



FOREWORD

The preliminary stage of education for children (ages 6 to 11) is the most important. It is the time when they begin to explore, understand and learn about the world around them. The National Education Policy 2020 (NEP-2020) adopts this idea and emphasizes on making education interesting, enjoyable and experiential. This education policy recommends comprehensive reforms and the adoption of innovative approaches in the Indian Education System. The basic objective of this policy is to empower students with creativity, logical reasoning and practical skills to face the challenges of the 21st century. Under this, special emphasis has been laid on making education more inclusive, holistic and skill-based.

Keeping these objectives in mind, the Rajasthan State Council of Educational Research and Training, Udaipur, has developed textbooks for primary classes. To ensure the all-round and holistic development of children, these textbooks integrate Indian knowledge traditions, 21st-century skills, social-emotional skills, arts and physical education. These textbooks not only encourage logical thinking, clear conceptual understanding, and creativity, but also strengthens the tendencies of inclusion, cultural unity and harmony.

The textbooks include effective, interesting and creative activities appropriate to the class level, along with interesting stories, poems and content from other genres, so that children can learn in an easy and enjoyable manner. There are also Suggestions for teachers at various places so that they can help children learn more effectively.

In this important journey of textbook development, the contribution of selected teachers from the State, experts at the State and National Levels and Voluntary Organizations has been significant. Without their cooperation, suggestions and impartial perspective, it would not have been possible to carry out this work effectively. We express our heartfelt gratitude to all stakeholders for their unprecedented contribution. Special thanks to all the esteemed Members of the Curriculum Review Committee, whose invaluable suggestions have guided the enhancement of this textbook.

The newly developed textbook is expected to make the learning-teaching process in the classroom smooth, enjoyable and excellent, and this will only be possible with the active cooperation of teachers. The role of teachers is not only limited to impart knowledge; they are also guides who inspire students to learn actively, they should adopt child-centered teaching methodology, while using this textbook allowing students to learn according to their interests and abilities. Additionally, they should pay special attention to promoting 21st-century skills, encouraging social-emotional development and effectively incorporating the values of Indian knowledge traditions into classroom teaching.

This book is in your hands. Millions of children in the state are eagerly looking upto you for learning. With our combined efforts, we are confident that they will certainly achieve their learning goals. Your thoughts and suggestions for improving the quality of the book (To enhance children's learning capacity) are always welcome.

Director

Rajasthan State Council of Educational Research
and Training, Udaipur

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Lesson - 1

Colourful Beads



Rajveer and pinky were playing with beads along with their friends, sitting in a circle in verandah of the house. They had taken 9 beads of four colours to play with.

Friends, we have to throw these beads into the circle as soon as our turn comes. Then we have to count and answer how many beads of which colour have fallen into the circle.

I will throw the beads first



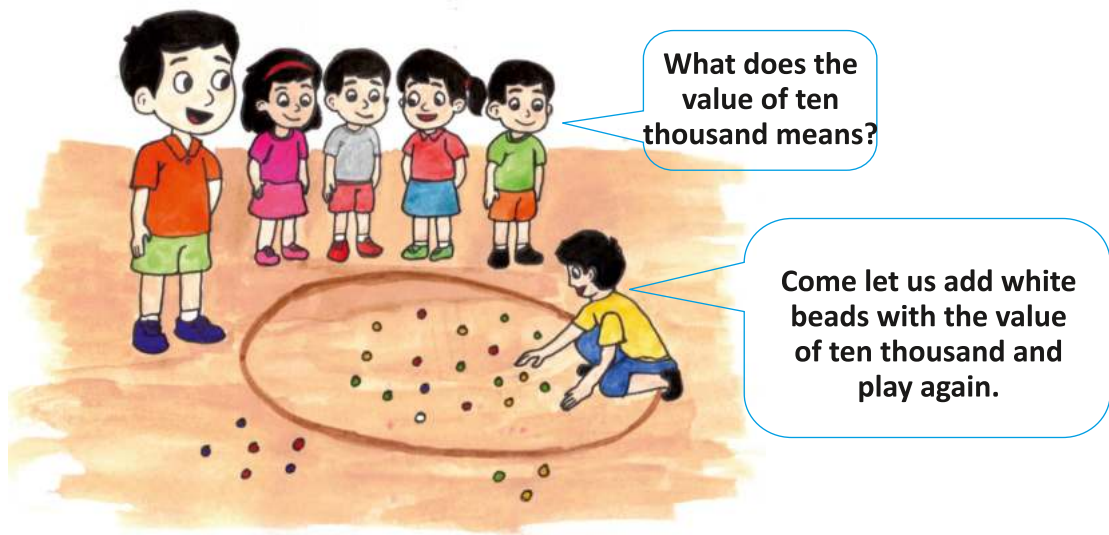
The number of beads of different colours that fall into the circle are as follows-

Name of the child	The red colour beads fallen in the circle (thousand)	The yellow colour beads fallen in the circle (hundred)	The green colour beads fallen in the circle (tens)	The blue colour beads fallen in the circle (one)
Mukesh	5	6	2	5
Seema	8	0	0	9
Rajveer	4	5	8	1
Pinky	2	5	0	0
Sunil	6	5	7	0



Here, consider blue beads as units, green beads as tens, yellow beads as hundreds and red beads as thousands. Then, represent the given numbers with colourful beads.

1. 5,625 = 
2. 8,009 =
3. 4,581 =
4. 2,500 =
5. 6,570 =



Mukesh- as 10 units = 1 tens

10 ten = 1 hundreds and

10 hundreds = 1 thousand

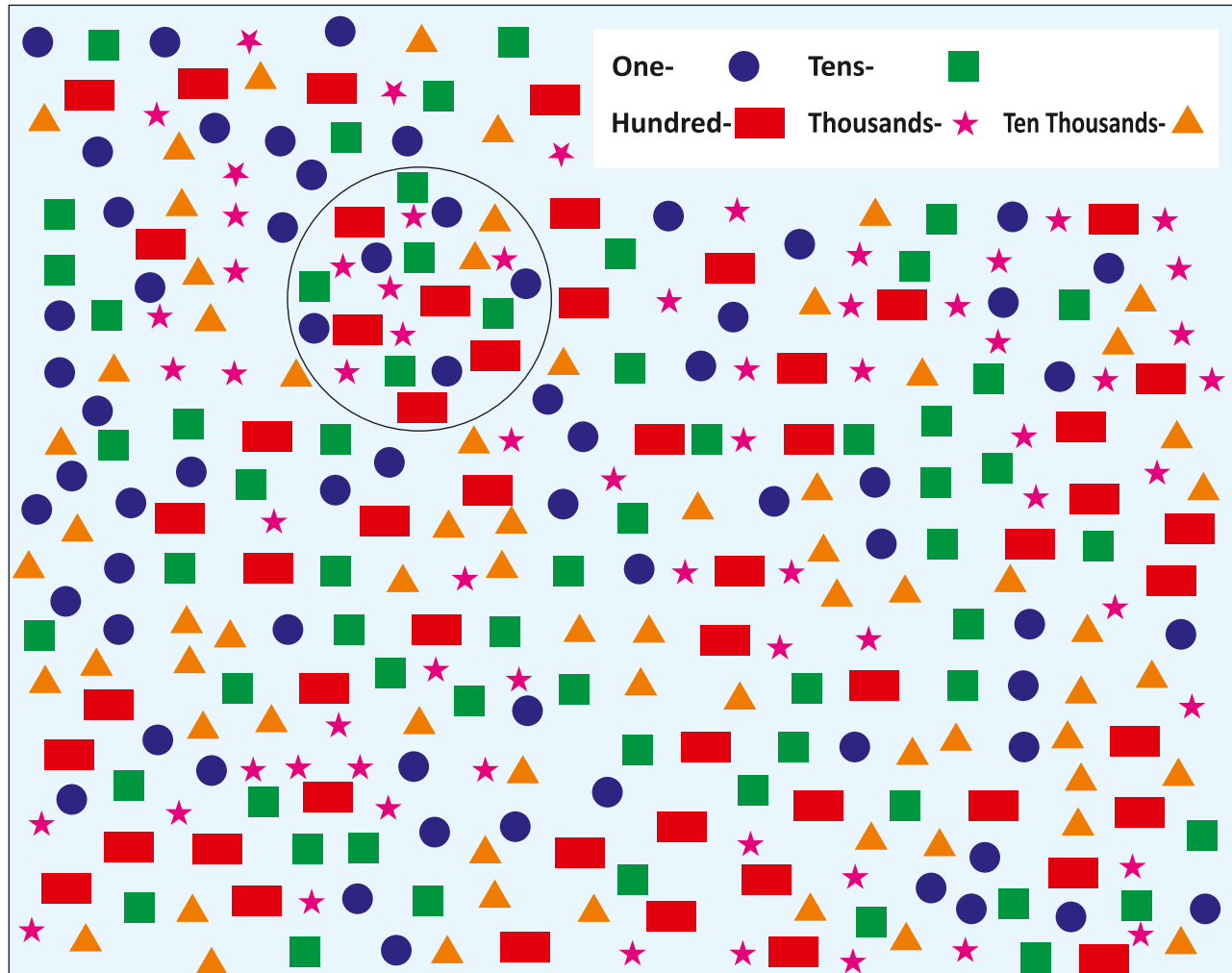
Similarly when thousand are 10, then we call it ten thousand.

It is written in the place value chart in following way-

Ten Thousand	Thousand	Hundred	Tens	One



Throw the ring on the game board below and count the different place value symbols that fall completely within the ring to form numbers.
(*Direction- only those pictures will be counted which comes completely in ring.*)



Ten Thousands 	Thousands 	Hundreds 	Tens 	Ones 	Numbers	Number (in words)
2	6	5	5	5	26,555	Twenty Six Thousand Five Hundred Fifty Five





Make numbers by observing the pictorial representation-

Pictorial representation	Number

The place value of each digit in the number 26,555 formed while playing on the game board is as follows-

2 6, 5 5 5

	Place value of 2 = 20,000
	Place value of 6 = 6,000
	Place value of 5 = 500
	Place value of 5 = 50
	Place value of 5 = 5

find the place value of each digit in the given number -

- 45,672
- 36,897
- 21,987
- 69,087
- 94,671
- 17,516



Seema secured the first position in class 10 and to celebrate this achievement her father bought her a laptop worth Rs. 45,699. For this, he paid in the bundle of 10,000 and 1000 to the shopkeeper. The remaining amount was paid using Rs. 100, 10 and 1 Rs.

How many bundles of 10,000 were given to the shopkeeper to buy the laptop?

How much total amount was given to the shopkeeper from bundle of 10,000 Rs.?

As 45,699 number is formed from 4 thousand, 5 thousand, 6 hundreds, 9 tens, therefore $45,699 = 4 \text{ ten thousand} + 9 \text{ tens} + 9 \text{ units}$.

$$= 40,000 + 5000 + 600 + 90 + 9$$

This form of numbers is known as expanded form.

Similarly the expanded form of $65,378 = 60000 + 5000 + 300 + 70 + 8$

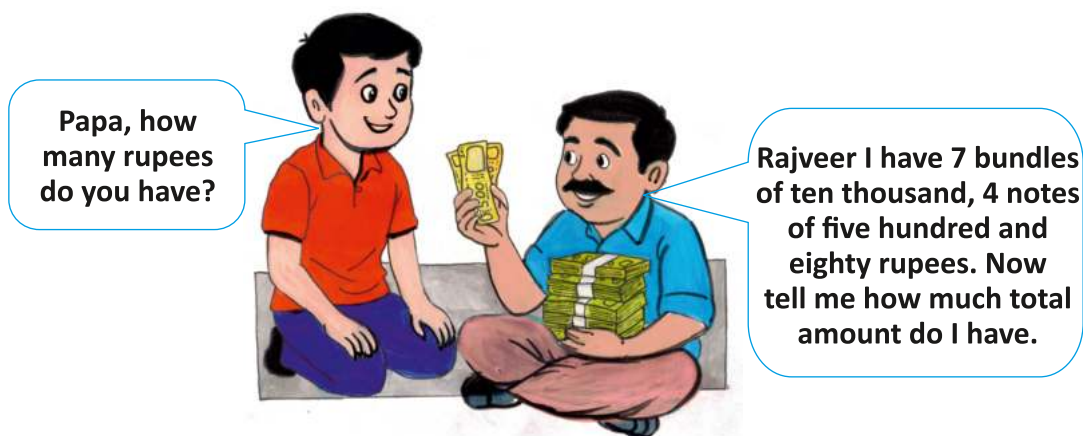
$$10101 = 10000 + 100 + 1$$

$$90001 = 90000 + 1$$

$$34927 = \dots\dots\dots + \dots\dots\dots + \dots\dots\dots + \dots\dots\dots + \dots\dots\dots$$

$$99000 = \dots\dots\dots + \dots\dots\dots + \dots\dots\dots + \dots\dots\dots + \dots\dots\dots$$

Think the value of two same digits is different, why?



Rajveer- 7 bundles of 10,000 = 70,000

4 currency notes of 500 = 2000 and 8 currency notes of 10 rupees



It means $70,000 + 2,000 + 80 = 72,080$

4 ten thousand and five hundred one = $40,000 + 500 + 1$
= 40,501

जंगल में शेर की दहाड़ सुनकर सभी जानवर 'नौ दो ग्यारह' हो गए।

Write the number used in the above idiom-

उससे दूर रहा करो वह 'चार सौ बीस' है।

Write the number used in the above idiom-

Similarly search for some more idiom in which numbers are used.

.....

Read the below mentioned statement and form 4 digit numbers and write down-

Statement	Number
One such number in which 2 in the place of thousand, 0 in the place of hundred, 7 in the place of tens and 0 in the place of unit	2070
One such number in which 7 in place of thousand, 3 in place of hundreds, 0 in place of tens and 4 in place of unit.	
One such number in which 3 is in place of thousand, 5 is in place of hundreds, 8 in place of tens and 9 in place of unit.	
One such number in which 2 in place of thousand, 0 is in place of hundreds, 1 in place of tens and 5 in place of units.	
One such number in which 8 in place of thousand, 0 is in place of hundreds, 0 in place of tens and 1 in place of unit.	

The importance of zero in technology

It is key component of the binary numbers system (0, 1) which forms the foundation of modern computers. Without zero, the decimal system





and various mathematical concepts would not possible. Zero is essential in computer programming, electronics and space science.

Binary number system- It is a number system that represents number using only two digits, 0 and 1. The base of the binary number system is two, which means it includes only two digits- zero and one. The binary number system zero and one are called a bit. Detailed information about the binary number system will be provided in your upcoming computer science text books.

Practice Work

1. Write the following numbers in expanded form-
 - (i) $45501 = \dots + \dots + \dots + \dots + \dots$
 - (ii) $91000 = \dots + \dots + \dots + \dots + \dots$
 - (iii) $32496 = \dots + \dots + \dots + \dots + \dots$
 - (iv) $10700 = \dots + \dots + \dots + \dots + \dots$
 - (v) $91377 = \dots + \dots + \dots + \dots + \dots$
 - (vi) $52086 = \dots + \dots + \dots + \dots + \dots$
2. Find the place value of 4 in the following numbers -
 - (i) $24550 = \dots$
 - (ii) $41000 = \dots$
 - (iii) $52444 = \dots$
 - (iv) $17404 = \dots$
3. Write the number formed in expanded form-
 - (i) $5000 + 8 = \dots$
 - (ii) $60000 + 3000 + 300 + 90 + 5 = \dots$
 - (iii) $10000 + 100 + 10 = \dots$





(iv) 1 ten thousand + 9 thousand + 8 hundred + 2 tens + 1 unit =

(v) 9 ten thousand + 9 hundred + 9 tens + 9 units =

4. Write the encircled number in words in the given currency note-

.....
.....
.....



5. Write the following numbers in words -

(i) 72562 = (ii) 82480 =

(iii) 80002 = (iv) 11111 =

6. Write the following numbers in digits-

(i) Five thousand two hundred fifty two =

(ii) Five thousand four hundred thirty two =

(iii) Seventy five thousand four hundred twenty nine =

(iv) Five thousand sixty nine hundred =

7. Write the largest and the smallest number formed from the given digits-

Digit	Largest Numbers	Smallest Numbers
3, 6, 2, 4, 1		
7, 0, 3, 5, 2		
4, 0, 1, 0, 1		
5, 2, 0, 5, 2		



5. Make numbers and write in words -

- (i) 6 ten, 0 hundred, 4 unit, 1 thousand one thousand sixty four
- (ii) 4 thousand, 1 unit, 4 hundred -
- (iii) 3 thousand, 7 hundred, 3 unit, 2 tens -
- (iv) 4 tens, 3 unit, 5 hundred, 2 thousand -

6. Match-

- | | |
|--|-----------------------------------|
| (i) I am equal to 20 notes of 100-100. | <input type="text" value="2500"/> |
| (ii) I will become five thousand by seven thousand and while writing there is 5 in place of hundreds. | <input type="text" value="6500"/> |
| (iii) I come between 6 thousand and seven thousand and while writing me there is 5 in place of hundreds. | <input type="text" value="1009"/> |
| (iv) I am 1 less than ten thousand and all my digits are 9. | <input type="text" value="1000"/> |
| (v) I am equal to two thousand and half thousand. | <input type="text" value="2000"/> |
| (vi) I am equal to 2 notes of five hundred. | <input type="text" value="9999"/> |
| (vii) I am 1 less than one thousand ten. | <input type="text" value="4900"/> |



Lesson - 2

Play with Numbers



Tara, Munni and sonu play a game together. Some number slips are kept in a box. Each of them takes turn tossing a coin. If it stops on head they will have to pick a number slip from the box everyone gets four chances to toss the coin.

The number written on the slip is recorded by writing it on sheet.



The player whose steps have the highest total sum will be the winner.

Tara's Sheet	Munni's Sheet	Sonu's Sheet
589	415	114
2157	3153	550
-	102	159
-	329	-
Total = 2746	Total =	Total =

Total the sheets of all three players and answer who is winner?

Let us find out -

Total of Tara's sheet = 2746 (number of four digit)

Total of Munni's sheet= 3999 (number of four digit)

Total of Sonu's sheet = 823 (number of three digit)

We know that the four digit number is greater than three digit number.

Therefore among Tara and Munni anyone is the winner.

How can we find out the smaller or larger number when the numbers have the same digits?

The digits of numbers with the same digits are compared at the largest place value.

As in the number 2746 and 3999 the largest place value is thousand and on this place digit 3 is greater than that digit 2 that is why Munni is the winner.

You can also play this game with your friends-

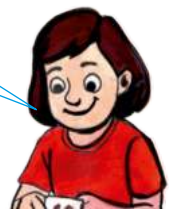
After Sonu went away Tara and Munni are playing the game of making 4 digit numbers from 2, 6, 9 and 5 digits. For this they have made some rules. That the starting digit of the number shall be from 6 (thousand), along with that one digit should be used one time only. Write all the number made by them-

6925, 6952, 6295,



But I think 6925 is the greatest number

Look, 6952 is the greatest number among all the numbers



- Look, in both these numbers, the digit at the thousand place is 6 and the digit at the hundreds place is 9. Up to this point, both numbers are the same.
- But in 6952, the tens digit is 2, which is equal to 20, whereas in 6925, the tens digit is 5, which means 50.
- As 50 is more than 20, so 6952 is greater than 6925.



Come on, now find out which and smaller number 6259 is 6592



Let us find out which is smaller number

- In both 6259 and 6592, the thousands digit is the same, so we cannot find out which number is greater just by looking at that.
- Here in 6259 the hundred digit is 2 whose place value is 200, whereas in 6592 the hundreds digit is 5, whose place value is 500.
- 200 is smaller than 500 so the number is 6259 is smaller than 6592.

In the evening both Sonu and Munni goes to market with their father. There they purchase television worth Rs. 15,725, refrigerator worth Rs. 9,500 and washing machine worth of Rs. 15,050.



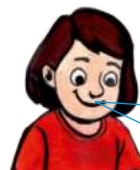
Munni, tell whose rate among these items is lowest?

This is very easy. First of all you look at the price of all the three items attentively. In the price of television and washing machine there are 5 digits whereas in the price of refrigerator there is only 4 digits. The number with less digit is smaller. That means the price of refrigerator has 4 digits so it is smallest number.



Our teacher told that when two numbers are equal we use = sign between them.

Similarly, when comparing numbers, we open the mouth of the > sign towards the greater number and keep the closed side of the < sign towards the smaller number.



Which sign <, >, = can we use in the price of refrigerator and washing machine.



It means $15050 > 9500$

but Munni has written the numbers in the way- $9500 \dots\dots\dots 15050$

Can you answer which symbol Munni should use?

You also put the appropriate symbol between the numbers given below ($>$, $<$, $=$)

67656675	30493409
1505015725	59985899
1572515050	95009500
157259500	900515725
1342514345	1628516285

Write the price of television, refrigerator and washing machine in descending order.

.....,,

If the price of the washing machine is increased from 9500 to 15500, then write the price of the television, refrigerator and washing machine in ascending order.

.....,,

Due to heavy rains, Lokesh's town was flooded. Due to the flood, the houses and belongings of many people in the town were flowed away. To help such people, Lokesh and his friends have set up a 'help and relief camp' in the town. In the relief camp, they helped the following number of people-

Name	Number of People Who Received Help
Lokesh	12,900
Manoj	9,950
Neeraj	12,308
Pratyaksh	9,969
Bhavna	10,000



1. How many people did Bhavna help in the relief camp?
2. Among Lokesh and Neeraj who helped fewer people?
3. Among Manoj, Pratyasksh and Bhavna who helped maximum people?
.....
4. Who helped the least number of people?
5. Who helped the most people?
6. Arrange the number of people in ascending order -
.....,,

Indian Number System

In the Indian number system we use commas (,) to separate digits into groups while writing numbers. Starting from the right side of the number, first three digits are 'unit section', then two digits are 'thousand section', 'lakh section', 'crore section', and so on.

Example- in number 243781284 the last three digits 284 are in units section the next two digits 81 are in the thousands section, the next two digits 37 are in lakhs section and 24 are in crore section.

Indian Number System

Crore		Lakh		Thousand		One		
Ten Crore	Crore	Ten Lakh	Lakh	Ten Thousand	Thousand	Hundred	Tens	One
2	4	3	7	8	1	2	8	4

According to the above table 243781284 number can be written as 24,37,81,284 in Indian Number System. It will be written in words as twenty four crore thirty seven lakh eighty one thousand two hundred eighty four.

Let us write this number in International Number System.



International Number System

Million			Thousand			One		
Hundred Million	Ten Million	Million	Hundred Thousand	Ten Thousand	Thousand	Hundred	Tens	One
2	4	3	7	8	1	2	8	4

According to the above table, in the international number system the numbers 243781284 is written as 243,781,284. In words it is written as two hundred forty-three million, seven hundred eighty one thousand, two hundred eighty four.

Thus we can see that in the Indian number system, starting from the right, the number is divided using commas after the first three digits and then in groups of two digits. Whereas in the international number system, starting from the right the number is divided using commas after each group of three digits.

Practice Work

- Look at the below mentioned group of numbers, circle (○) the smallest number.
 - 4305, 4035, 6521, 6531, 4005, 4500
 - 9999, 10000, 7527, 5772, 672, 6967
- Circle (○) the biggest number given.
 - 2341, 4251, 21941
 - 46925, 64785, 64758
- Write the below given number in ascending order.
 - 26886, 30725, 30840, 26688

Ascending order =,,,



(ii) 59307, 53907, 59703, 50739

Ascending order =,,,

(iii) 77545, 77745, 74443, 74344

Ascending order =,,,

(iv) 68309, 68239, 68390, 68923

Ascending order =,,,

4. Write the below given number in descending order -

(i) 31525, 51425, 32325, 32154

Descending order =,,,

(ii) 83057, 86316, 86154, 83507

Descending order =,,,

(iii) 76543, 73564, 76435, 73654

Descending order =,,,

(iv) 8004, 80004, 8068, 8098

Descending order =,,,

5. Write the smallest and the greatest number made from the digits 2, 8, 9, 7 and 5 -

(i) The greatest number =

(ii) The smallest number =

(iii) Difference of both the numbers =

6. Write the smallest number and the greatest number having four digits-

(i) Smallest number of four digits =

(ii) Greatest number of 4 digits =





7. Write the greatest and the smallest number of 5 digits whose tens digit is 6 -
- (i) The greatest number =
- (ii) The smallest number =
8. Using the digits 9, 7, 20 and 5 make a five digit number and write the greatest and the smallest number -
- (i) Greatest number =
- (ii) Smallest number =
- (iii) Difference in the greatest number and the smallest numbers
9. The smallest number made from below mentioned digits are written match with proper number -
- (i) 9, 8, 4, 6 1122
- (ii) 2, 3, 2, 1 4489
- (iii) 8, 4, 4, 9 4689
- (iv) 1, 2, 2, 1 1223
10. Make the greatest and the smallest number from the digits written below-
- (i) 7, 2, 1, 4, 9 (ii) 9, 0, 5, 4, 0
- (iii) 2, 1, 8, 0, 5 (iv) 2, 6, 3, 2, 4, 3
11. Use appropriate symbols $<$, $>$, $=$ in between the following -
- (i) 10123 20123 (ii) 45678 45678
- (iii) 99876 98765 (iv) 30001 29999





(v) 87456 87465

(vi) 51322 51322

(vii) 12000 12001

(viii) 45000 44999

10. Write the below mentioned number in words after changing them into Indian Number System and International Number System -

(i) 100123

(ii) 8345678

(iii) 99876

(iv) 300001

(v) 874560

(vi) 5132246

(vii) 12000

(viii) 449999



Lesson - 3

The World of Addition and Subtraction



Ajay wants to distribute Motichoor Laddoos on the Independence Day in three schools in his village. If there are 1341 students in the higher secondary school, 1220 in the Girl's higher secondary school and 1137 in the primary school, then How many Laddoos, Ajay will need to prepare ?

To add the given number we have to write the unit digit under unit, tens digit under tens, hundreds digit under hundreds and thousands digit under thousands. Then first add unit digits $1+0+7=8$, then digit $4+2+3=9$, then add hundreds digits $3+2+1=7$ and thousands digits $1+1+1=3$.

	Thousand	Hundred	Tens	One
	1	3	4	1
+	1	2	2	0
+	1	1	3	7
	3	6	9	8



Think and Answer –

- If Ajay distributes laddoos in higher secondary school and girls higher secondary school, then how many laddoos will he need to prepare ?
- If Ajay distributes laddoos in higher secondary school and primary school, how many laddoos will he have to prepare ?

	Thousand	Hundred	Tens	One
	2	4	1	5
+	1	2	4	3

3. If Ajay distributes laddoos in primary schools and in Girl's higher secondary school, how many laddoos will he have to prepare ?
4. There are 2415 students in the village's higher secondary school and 1243 students in primary school, so what is the total number of students ?
5. The population of a village is 12085 and of another village is 10504. Find out the total population of both the villages ?

Let us do –

1. Add the numbers-

(i)

Thousand	Hundred	Tens	One
3	3	1	2
+	2	1	2

(ii)

Thousand	Hundred	Tens	One
5	4	1	5
+	2	3	4

(iii)

Thousand	Hundred	Tens	One
३	४	७	३
+	२	२	५

2. In a village pasture there are 1335 cows, 2430 goats and 1413 buffalows. How many animals are grazing in the pasture.
3. The population of village is 12085 and another is 10504. What is the total population of both villages?

Addition of carry over–

- For adding 2525 in 1697, first add unit digits 7 and 5. For e.g. $7+5=12$, place the digit 2 of number 12 under the digit in the units place in addition.
- In 12 the digit 1 is carry over (which is tens). Write this carry (1) above the tens digit. Now add the tens digits alongwith the carry. $1+9+2=12$ in the number 12, digit 2 should be written above the digit of tens.
- In 12 digit 1 will be carried over. Now write this 1 carry on the digit

Thousand	Hundred	Tens	One
①	①	①	
1	6	9	7
+	2	5	2
	4	2	2

above hundreds. Now add the hundreds digit with carry over. $1+6+5=12$
Now digit 2 of 12 should be written above the tens digit.

- Write digit 1 as carry over on thousand. Now add the digits of thousands with carry over $1+1+2=4$. In this way $1697+2525=4222$.

4. In the Pushkar fair of Rajasthan thousands of people come to sell and buy animals/cattle. In this fair many varieties of animals come. Once in Pushkar fair, 1145 camels, 2778 sheep, 5369 goats, 1425 horses and 8319 cows were brought.



- What was the numbers of camels in Pushkar fair ?
 - What was the total number of goats and sheep in Pushkar fair ?
 - Total number of horses and cows in Pushkar fair ?
 - If 200 more camels join to the fair, then what will be the total number of camels ?
 - In Pushkar fair which animal were lowest in number and highest in number ?
5. Mahila Grah Udhog prepared poppadoms are as follows. Find out how many popadoms were prepared during the months of April, May and June.

Month	April	May	June
Total	29278	30089	15967

	Ten Thousands	Thousand	Hundred	Tens	Unit
	2	9	2	7	8
+	3	0	0	8	9
+	1	5	9	6	7

Know this also –

When 0 is added to any number, the total is always the same number.

For eg. $- 3 + 0 = 3$, $6 + 0 = 6$, $0 + 9 = 9$, $0 + 0 = 0$

Subtract and See –

1. Anjana, Ayushi, Kiran and Vishal went to market for shopping. Anjana had Rs. 350, Ayushi had ₹ 450, Kiran had ₹ 400 and Vishal had ₹ 550. They all went to a store and purchased some items. Anjana purchased items worth ₹ 120, Ayush ₹ 180, Kiran ₹ 100 and Vishal ₹ 200. How much amount (many Rupees) is left with each of them ?



2. Meera Kaki has 1135 deepak lamps. Out of which 756 are sold, then tell how many are left with her?

	Thousand	Hundred	Tens	One
	0	⑩	②	⑤
	1	1	3	5
-		7	5	6
	0	3	7	9

Here we can not subtract 6 from the unit digit 5. Borrow 1 from tens 3. Now units has 15 after adding 10. Now subtract 6 from 15 and the remaining is 9.

In the same way from tens digit 2 we can not subtract 5. So borrow 1 tens from hundreds. Now subtract 5 out of 12, remaining will be 7.

7 can not be subtracted from hundreds '0' so borrow 1 hundreds from thousands then subtract 7 from 10 and remaining will be 3.

3. There are 4550 books in a library in which 1125 books of Maths and 716 books of Science are there. Now how many books of other subjects are there in the library?

Maths Books = 1125
 Science Books = 716
 Total Books of
 both the subjects = 1841

Thousand	Hundred	Tens ①	One
1	1	2	5
0	7	1	6
1	8	4	1

Remaining Books in Library = Total Books in Library - Total Books of both the subjects

Remaining Books in Library = 4550 - 1841

Thousand ③	Hundred ⑮	Tens ④	One ⑩
4	5	5	0
1	8	4	1
2	7	0	9

Practice Work

1. Solve-

(i) $\begin{array}{r} 3968 \\ + 2031 \\ \hline \end{array}$

(ii) $\begin{array}{r} 5436 \\ + 3142 \\ \hline \end{array}$

(iii) $\begin{array}{r} 3080 \\ + 2017 \\ \hline \end{array}$

(iv) $\begin{array}{r} 5643 \\ + 2357 \\ \hline \end{array}$

(i) $\begin{array}{r} 9874 \\ - 4352 \\ \hline \end{array}$

(ii) $\begin{array}{r} 4762 \\ - 2437 \\ \hline \end{array}$

(iii) $\begin{array}{r} 8670 \\ - 3723 \\ \hline \end{array}$

(iv) $\begin{array}{r} 7000 \\ - 4052 \\ \hline \end{array}$

2. In a forest there are 3570 trees of Khejdi, 1280 trees of Neem and 2465 trees of Sheesham. How many total number of trees are there ?



3. Piyush and his uncle went to the city to buy goods. They bought an almirah for ₹ 7875, a washing machine for ₹ 8750 and a Television for ₹ 8460. Tell how much total amount they spent on the goods.
4. A farmer sold wheat for ₹ 68756, Mustard ₹ 78580 and Gram for ₹ 38750 in the crop market. How much amount of crops did farmer sell in total ?
5. In a school there are 3896 boys and 5768 girls. How many total students are there in the school ?
6. Nagar Palika planted 12800 trees under Hariyalo Rajasthan Abhiyan. 3750 trees were planted in first phase, 4370 in second and remaining trees in third phase. How many trees were planted in third phase ?
7. Solve-

(i) $\begin{array}{r} 2864 \\ + 3430 \\ \hline \end{array}$

(ii) $\begin{array}{r} 6283 \\ + 8239 \\ \hline \end{array}$

(iii) $\begin{array}{r} 4692 \\ + 6384 \\ \hline \end{array}$

(iv) $\begin{array}{r} 3840 \\ + 8069 \\ \hline \end{array}$

(i) $\begin{array}{r} 9862 \\ - 8123 \\ \hline \end{array}$

(ii) $\begin{array}{r} 3094 \\ - 2223 \\ \hline \end{array}$

(iii) $\begin{array}{r} 9962 \\ - 4823 \\ \hline \end{array}$

(iv) $\begin{array}{r} 9480 \\ - 4089 \\ \hline \end{array}$

8. The cost of one sewing machine is ₹, 450 and fodder cutting machine is ₹, 900. Which machine is costly and by how much amount ?
9. A farmer sold a buffalo worth ₹ 94,800 and purchased a cow worth ₹ 32,100 and two goats worth ₹ 16,200. How much money is left with the farmer ?
10. There are 4750 trees in a field. Among them 1895 are fruit trees and remaining are shady tree. How many shady trees are there ?
11. Find the difference between the largest number of four digits and smallest number of three digits ?
12. The total of two number is 9874, one of number is 6385 find another number ?



Lesson - 4

Rotate and Observe



You must have seen a wheel, a spinner, a fan, a clock's hand and a door rotating. A fan rotates completely and the clock's hand also makes a complete circle, but a door rotates only a quarter of a turn. Look around and observe which objects rotate and how much they rotate.



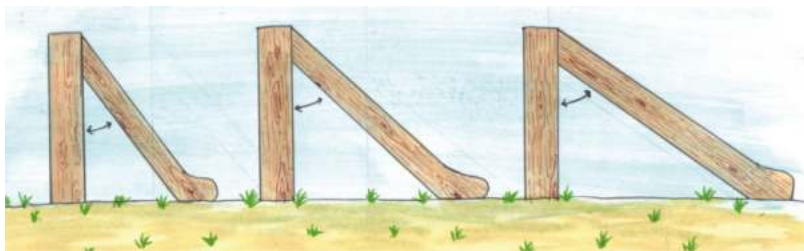
Anu made a hole in icream sticks and tied them together with a thread. Now she could rotate it as much as she wants.



Slide Game—

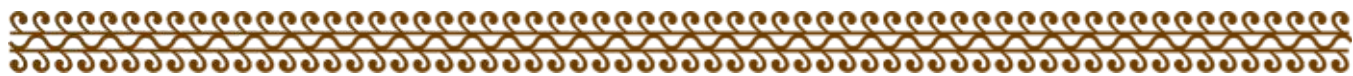
There is a slide in Anu's school. She plays on it every day during recess with her friends. She climbs up using the stairs and then slides down from the top.

Ravi : come on this slide. You can slide down even faster on it.



Have you ever played on a Slide ? Think, why did Ravi slide down faster ?

Ravi made three slides using cardboard.

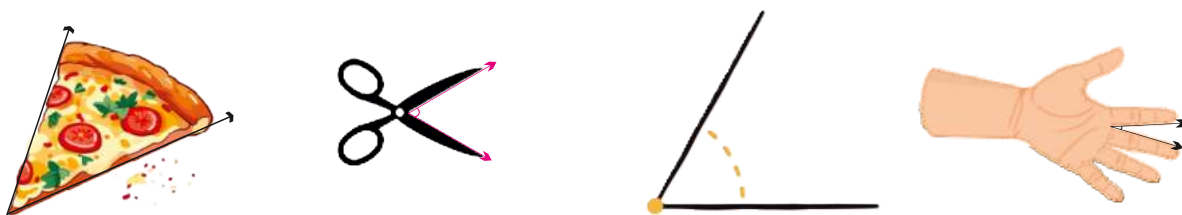


You too can prepare slide by joining two cardboard sheets. Then roll a ball, a bottle cap, or a piece of chalk on it.

See from which slide the objects come down faster.

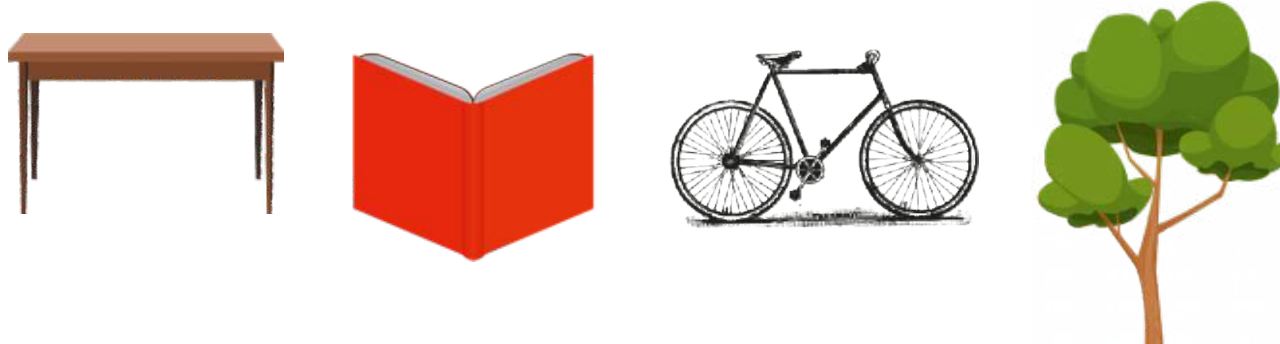
At the point where the two cardboard sheets meet you will notice a corner formed. The space between the two cardboard sheets shows us an **angle**. Such inclination, bands or turns are called angles.

Observe angles are also formed -

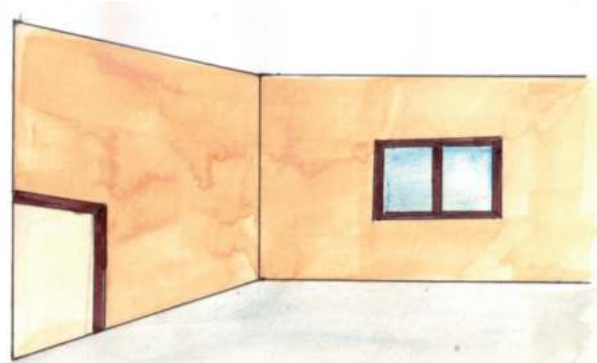


Look around our classroom and find different angles. Discuss it.

Wherever you see an angle, draw a circle around it.

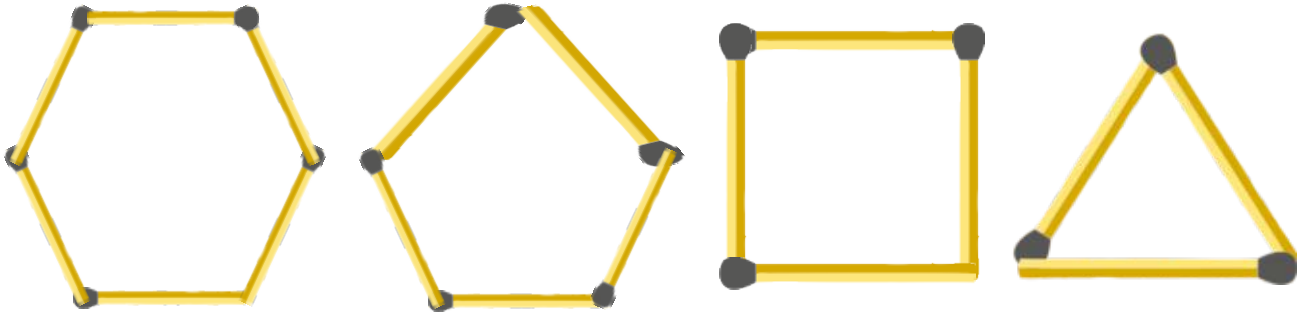


Angle : In this picture there are two hands of a clock, there is a little band between two walls of an open book. Where is the angles formed in between ?



You also try this-

Below are the figures made with the help of matchsticks. See how many angles are there in it ? Can you change the shapes with help of matchstick after changing their angles.



Anu : All angles does not seem equal ? Some has less curve, some has more curves. Can we measure them ?

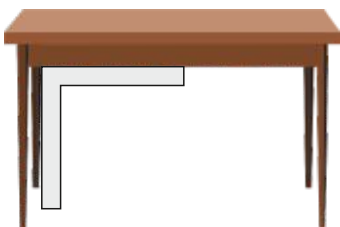
Ravi : Yes Anu, look our teacher taught us how to check the angles with the help of a paper stripe.

You also try this-

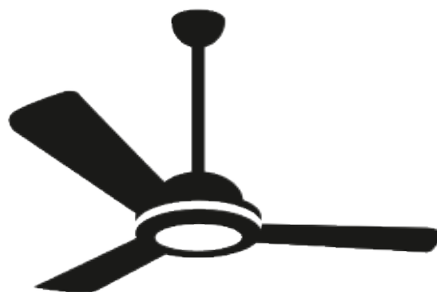
Take a stripe of paper, fold it and give it 'L' shape in this way prepare an angle checker.

Wherever a right angle is formed on an object, place one arm of it along one edge of the object and check whatever the angle is smaller or greater than the right angle.

Anu measured the angles-



It is equal to right angle



It is greater than right angle

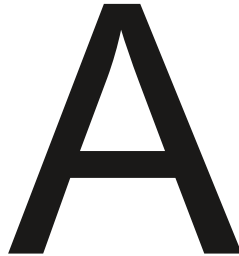
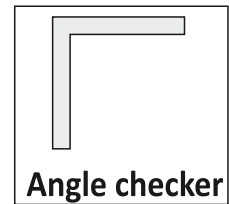


It is smaller than right angle



Fold a rectangular paper and prepare an angle checker.

Anu : This angle checker is very useful.



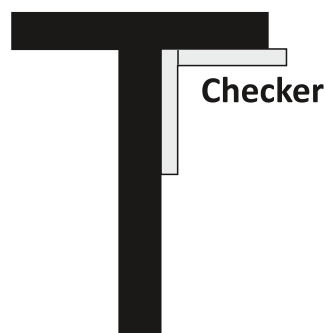
Ravi : Okay Anu, I will check the angles formed in the letter A of your name. Let's see how many right angles are there. How many angles are smaller than a right angle, and how many are greater than a right angle.

Ravi : Letter 'A' has more than 2 right angles, remaining angles are smaller than right angle.

Anu : Yes Ravi. In letter R of your name one angle is smaller than right angle.

Ravi : Absolutely right.

You also write your name in english and find out the angles in the alphabets of your name with the help of angle checker that how many angles are smaller than right angle and greater than right angle.



Now, you can find out smaller and greater angle than right angle.

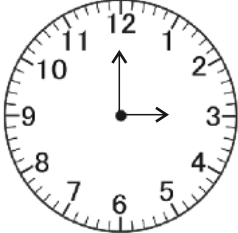
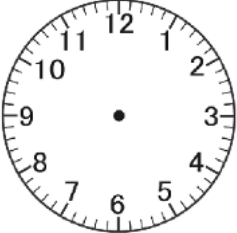
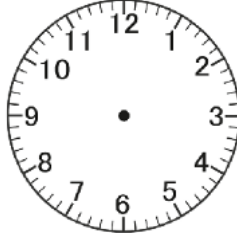
Look around you and observe such things in which angle is formed. Draw picture and measure the angle and write in the list below with the help of angle checker.





Picture of the thing	Right Angle	Obtuse Angle	Acute Angle

Using the clock hands, show the angles as given below -

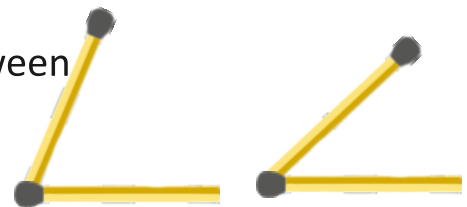
Right Angle	Obtuse Angle	Acute Angle
		

Look at the clock and answer how many times does right angle is formed between the hands of clock ?

Measuring angles –

Anu : Ravi observe the two angles made between both the matchsticks.

Ravi : Both the angles are right angles.



Anu : Yes but which among them is greater than right angle. Can we measure angle in centimeter or meter.

Ravi : Let us ask to the teacher.

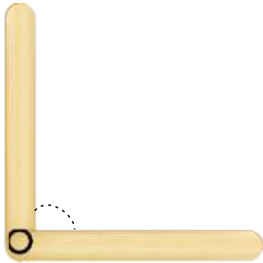
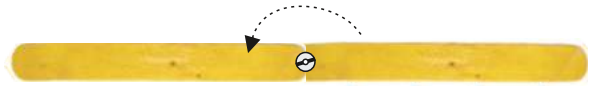
Teacher : We measure an angle in **degree (°)**. Do you remember how



Anu rotate the icecream sticks.

Anu : I can rotate it full, half or as I wish. Look I could rotate it half also.

Teacher : 'Good' the angle formed in it is of 180° can you find out if we rotate it half of half which angle will be formed of how many degree?



Ravi : Half of 180° , means 90°

Anu : Right angle is 90° . If I rotate half of it how much degree will be formed?

Half of 90° will be ?

Anu : Half of 90° is 45° .

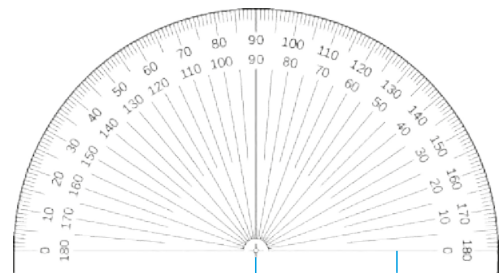
Teacher : Which means if we make half the angle of 90° we get angle of 45° .



Come let us see protractor -

Let us measure the angle with the help of D.

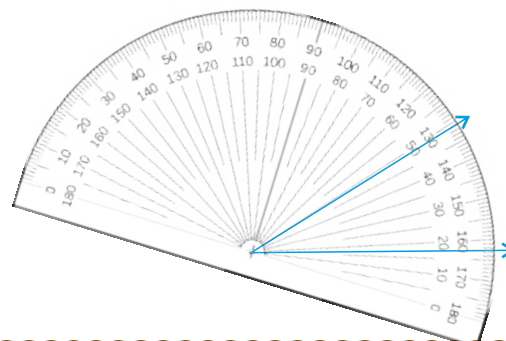
Anu : It also has numbers written like that on a scale and the space between every two number is divided into 10 parts.



Mid Point base line

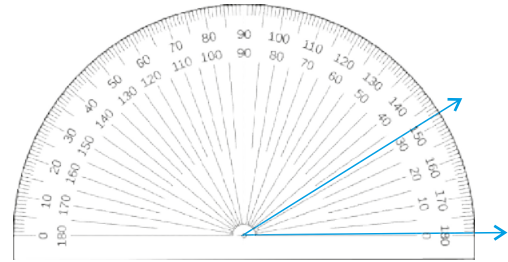
Look, there is a base line. At the bottom and the point in the middle is called mid point.

First of all keep the mid point of protractor on the vertex of the angle. The point where two lines meet is called the vertex.

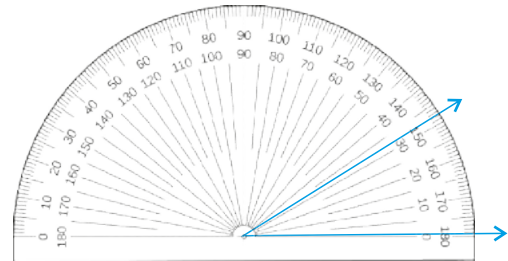




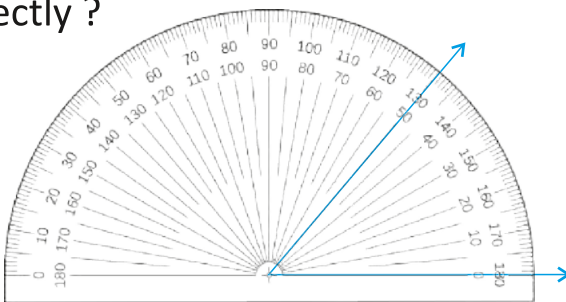
Then align the base of the protractor with one arm of the angle. (This is the line from the mid point to zero.)



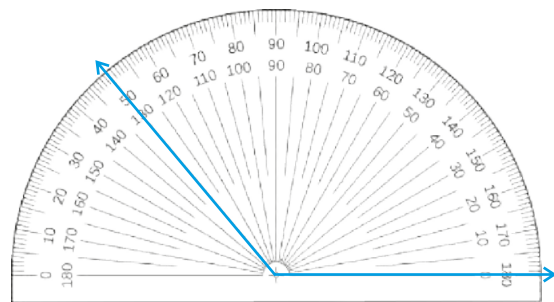
Where formed from zero towards the second arm of the angle. Find out how many degree the angle is of ?



Ravi : Anu we both shall make an angle of 50° . Let us see who makes it perfectly ?



50° angle made by Ravi



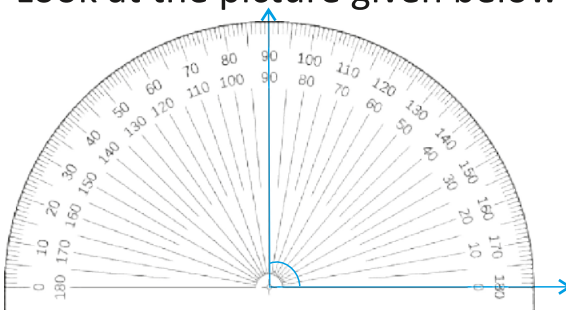
50° angle made by Anu

Now answer who has measured the angle perfectly ? If it is wrong then why ? state the reason

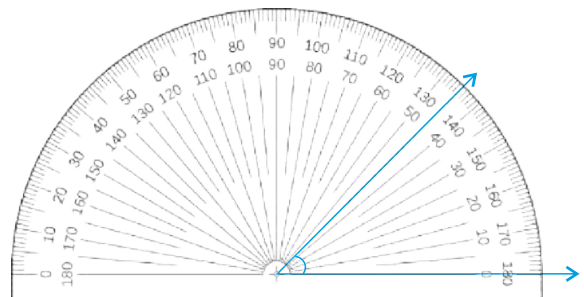
Also know this –

Angle smaller than right angle is known as **acute angle**. Angle greater than right angle and smaller than 180° is known as obtuse angle.

Look at the picture given below and measure the angle.

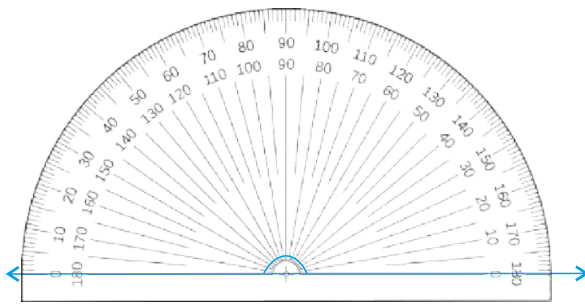


Measurement of Angle 90°

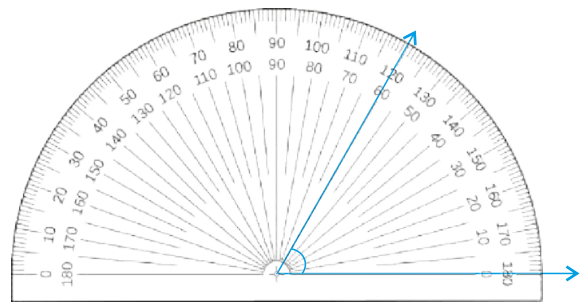


Measure of angle.....



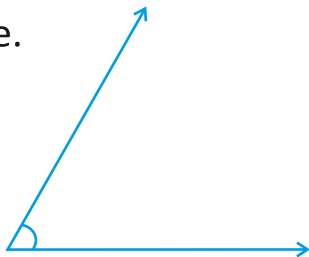


Measurement of Angle =



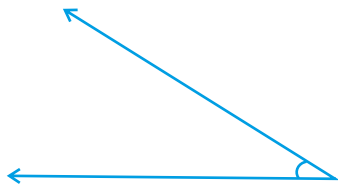
Measurement of Angle =

First of all estimate and then with the help of protractor measure the angle.



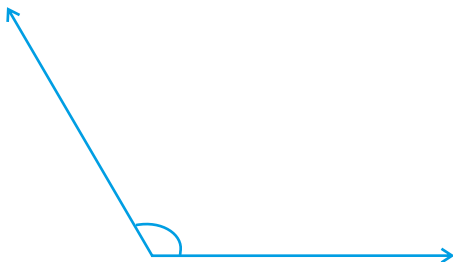
Estimated measurement.....

Actual measurement.....



Estimated measurement.....

Actual measurement.....



Estimated measurement.....

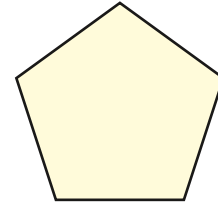
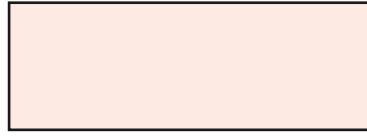
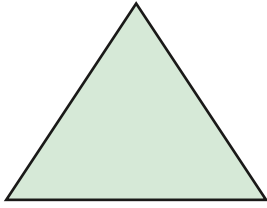
Actual measurement.....



Estimated measurement.....

Actual measurement.....

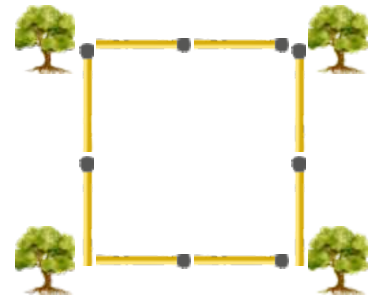
Find out the measurement of all the angles in these figures in degrees-



Solve the Riddle –

This is square field made with 8 sticks. There is one tree at each corner.

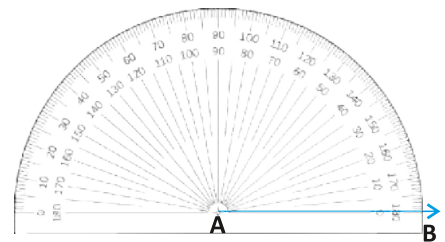
Now take 4 more sticks using these 12 sticks make a square field again. Keep in mind that the trees must remain outside the field at their original positions.



See if changing the angles at the corner will help.

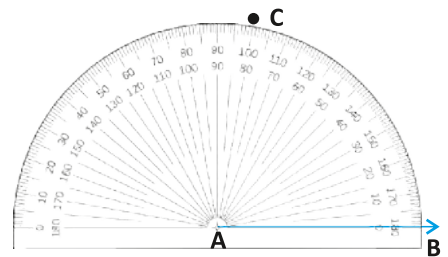
Making angle with the help of protractor -

Making 80° angle with the help of a protractor.



Step-1 Make a ray A, B.

Step-2 Keep protractor in such a way that the Mid point of the base should be on. A and line depicting '0' on protractor should be parallel to AB line.



Step-3 Using the edge of the protractor observe long the circular scale from 0° upto 80° .

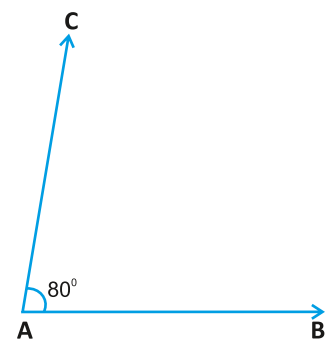
Step-4 Mark point 'C' in the line with the 80° measurement.

Step-5 Remove protractor and make a ray 'A C'. Angle 'B A C' is 80° .

Do yourself –

With the help of protractor make following angles.

- (a) 45° (b) 105° (c) 90° (d) 150°

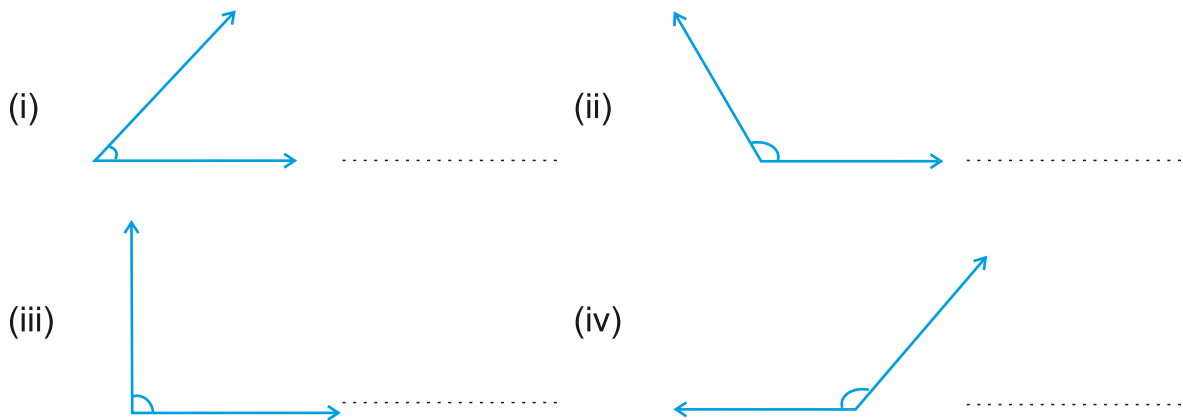


Practice Work

1. Match-

- | | |
|-------------------|--------------------------------------|
| (i) Acute Angle | 90° |
| (ii) Obtuse Angle | 90° Less than 90° |
| (iii) Right Angle | 90° more than 90° and less than 180° |

2. Measure the angle with the help of protractor and write its value-



3. Which is the measuring unit of angle ?

- (a) Kilogram (b) Meter (c) Centimeter (d) Degree ()

4. What is the measure of the angle formed at the rectangular wall ?

- (a) 45° (b) 180° (c) 90° (d) 60° ()

5. Fill in the blanks-

- (i) Where two ray meet that point is called
- (ii) 90° angle is called
- (iii) For measuring angle is used.

6. Draw angles with the help of protractor-

- (a) 90° (b) 120° (c) 45° (d) 160°

Lesson - 5

The Journey of Multiplication



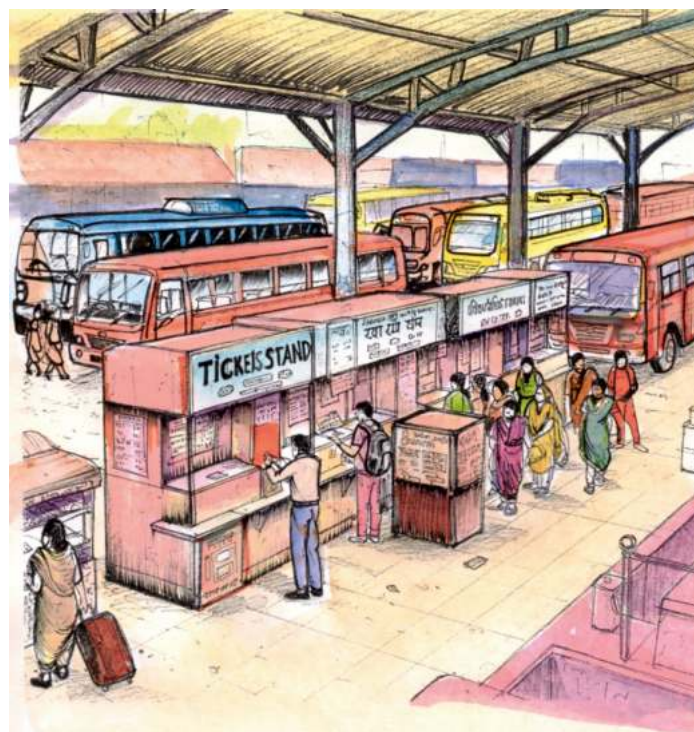
Suresh works at Jaipur bus stand and prepare travel tickets. He only issues tickets for Volvo buses going from Jaipur to Delhi.

The fare from Jaipur to Delhi in these buses Rs. 665 per person. On Monday, Suresh issued 8 tickets for the first bus and 42 tickets for the second bus.

How much money did Suresh approximately collect from the tickets made for the first bus? Can you estimate the amount?

Suresh made an estimate in this way –

665 is approximately near 700
which means $700 \times 8 = 5600$
As 665 is approximately 30 less than 700
Therefore $30 \times 8 = 240$
which means
 665×8 is approximately
 $5600 - 240 = 5360$



Similarly, he estimated the amount collected from the tickets of second bus also –

665 is near 700
and 42 is near 40
Which means
 $700 \times 40 = 28000$



Solve-

- (i) 400×55 (ii) 563×49 (iii) 720×23 (iv) 298×60



After this he changed the numbers into expanded form and calculated the total amount received from the tickets of both buses in this way.

Total amount of 8 tickets prepared for first bus = 665×8				$ \begin{aligned} 665 \times 8 &= (600 + 60 + 5) \times 8 \\ &= (600 \times 8) + (60 \times 8) + (5 \times 8) \\ &= 4800 + 480 + 40 \\ &= \dots\dots\dots \text{Rs.} \end{aligned} $
Ticket	600	60	5	
8	600×8 $= 4800$	60×8 $= 480$	5×8 $= 40$	
$4800 + 480 + 40 \text{ Rs.} = \dots\dots\dots$ Rs.				

Total amount of 42 tickets prepared for second bus = 665×42				$ \begin{aligned} 665 \times 42 &= (600 + 60 + 5) \times (40 + 2) \\ &= (600 + 60 + 5) \times 40 + (600 + 60 + 5) \times 2 \\ &= (600 \times 40) + (60 \times 40) + (5 \times 40) + \\ &\quad (600 \times 2) + (60 \times 2) + (5 \times 2) \\ &= \dots\dots\dots + \dots\dots\dots + \dots\dots\dots \\ &\quad + \dots\dots\dots + \dots\dots\dots + \dots\dots\dots \\ &= \dots\dots\dots \text{Rs.} \end{aligned} $
	600	60	5	
40	600×40 $= 24000$	60×40 $= 2400$	5×40 $= 200$	
2	600×2 $= 1200$	60×2 $= 120$	5×2 $= 10$	
$24000 + 2400 + 200 + 1200 + 120 + 10 \text{ Rs.} =$ $\dots\dots\dots \text{Rs.}$				

These questions were first solved by making estimates. Now like Suresh write their expanded forms, solve them and find the correct answer

- (i) 400×55 (ii) 563×49 (iii) 720×23 (iv) 298×60

Seeing Suresh calculating in his way, his friend Mukesh who was sitting at the ticket counter, suggested him another method to calculate-

But how did you do this Mukesh



$$\begin{array}{r}
 665 \\
 \times 42 \quad (40 + 2) \\
 \hline
 1330 \quad (665 \times 2) \\
 + 26600 \quad (665 \times 40) \\
 \hline
 27930
 \end{array}$$

See first I changed 42 into 40 + 2 and for multiplying it with 665, wrote it in such a way. Then 665 multiply 2 = 1330 and 665 multiply 40 = 26600



Suresh prepared tickets for 231 people in last 8 days. He calculated this with the help of the method taught to him by Mukesh in such a way.

$$665 \times 231$$

$$\begin{array}{r}
 665 \\
 \times 231 \quad (200 + 30 + 1) \\
 \hline
 665 \quad (665 \times 1) \\
 + 19950 \quad (665 \times 30) \\
 + 133000 \quad (665 \times 200) \\
 \hline
 153615
 \end{array}$$

665 multiply 1 = 665,
665 multiply 30 = 19950
665 multiply 200 = 133000



If Suresh prepared tickets of 1230 passengers in a month, then how much amount of tickets did Suresh prepared.

$$1230 \times 665$$

$$\begin{array}{r}
 1230 \\
 \times 665 \quad (600 + 60 + 5) \\
 \hline
 \text{-----} \quad (1230 \times 5) \quad \text{(Half of 1230 is 615 and 1 zero means 6150)} \\
 + \text{-----} \quad (1230 \times 60) \quad \text{(Product of 123 X 6 and two zeros)} \\
 + \text{-----} \quad (1230 \times 600) \quad \text{(Product of 123 X 6 and three zeros)} \\
 \hline
 \hline
 \hline
 \end{array}$$

You also solve it using Mukesh's method. Discuss among Mukesh and Suresh whose method was easy.

(i) 437×76 (ii) 581×69 (iii) 981×18 (iv) 7956×65

(v) 8602×325 (vi) 3824×23 (vii) 9348×67

While returning home from bus stand Mukesh and Suresh stopped for drinking tea. There Mukesh told that his cow gives 8 litre milk in a day then Suresh asked how much milk will the cow give in April month?

Both were engaged in calculating the amount of milk from cow for the entire month.



You help them -

April month has days

Cow gives litre milk in a day.

In one month, it will give litre milk

Think and answer –

If there are 1000 such cows then how much milk will be received in a day?

Solution – Thousand cows will give $8 \times 1000 = 8000$ litres milk (which means $8 \times 1 =$ three zeros with 8)

If there are 5000 cows how much milk will be received in total?

5000 cows will give $\times$ litres milk. (which means $5 \times 8 = 40$, six zeros with 40)

Suresh drinks 10 glass of water every day then –

1. How many glasses of water will he drink in January? glass
2. How many glasses of water will he drink in a year? glass
3. Estimate and find out how many glasses of water in a year? glass

Complete the pattern –

(i) Take one number

(ii) Now double it

$$\boxed{2} \times \boxed{} = \boxed{}$$

(iii) Now multiply the answer with 5

$$\boxed{} \times \boxed{} = \boxed{}$$

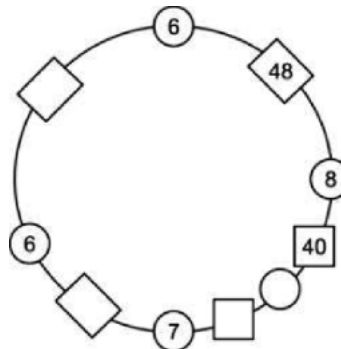
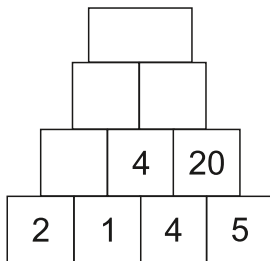
(iv) Now divide the answer by 10

$$\boxed{} \div \boxed{} = \boxed{}$$

Fill in the blanks -

- Take any three digit number
- Now multiply it with 7 $\times$ $7 =$
- Now multiply the answer by 13 $\times$ $13 =$
- Now multiply the answer with 11 $\times$ $11 =$
- Now observe the answer. Do you see the same number in it? In this number how many times is that number coming? Now repeat it with other numbers of 3 digits.

Understand the pattern given below and fill the empty boxes with numbers.



Fill the blanks according to the pattern-

(i) $(0 \times 9) + 1 = 1$

(iv) $(123 \times 9) + 4 = \dots\dots\dots$

(ii) $(1 \times 9) + 2 = \dots\dots\dots$

(v) $(\dots\dots \times 9) + 5 = 11111$

(iii) $(12 \times 9) + \dots\dots\dots = 111$

(vi) $(\dots\dots \times 9) + 6 = \dots\dots\dots$

Practice Work

1. Solve –

(i) Product of 3257×100 is -

- (a) 32570 (b) 325700 (c) 3257000 (d) 32507 ()

(ii) By multiplying 5681 by 0 what product do we get -

- (a) 5681 (b) 56810 (c) 0 (d) 5680 ()

(iii) How many seconds are there in 12 hours ?

- (a) 20,300 (b) 43,500 (c) 42,300 (d) 43,200 ()

2. Fill in the blanks -

(i) $125 \times 10 = \dots\dots\dots$

(ii) $53576 \times 0 = \dots\dots\dots$

(iii) $7500 \times \dots\dots\dots = 75000$

(iv) $5050 \times 300 = \dots\dots\dots$

3. Solve the given multiplication chart -

S.No.	Number	x 10	x 200	x 3000	x 4000
1.	5	$5 \times 10 = 50$	$5 \times 200 = 1000$		
2.	25				
3.	105				
4.	203				
5.	340				
6.	661				
7.	2105				

4. Multiplication -

$$\begin{array}{r} 2305 \\ \times 369 \\ \hline \end{array}$$

$$\begin{array}{r} 3210 \\ \times 120 \\ \hline \end{array}$$

$$\begin{array}{r} 4652 \\ \times 225 \\ \hline \end{array}$$

$$\begin{array}{r} 2516 \\ \times 408 \\ \hline \end{array}$$

5. One garden has 118 flowers beds and every flower bed has 655 plants. Now tell how many plants are there in that garden?
6. Kavita spends 750 Rs per day for development work in a school. Then find out how much Rupees does she spend on development work entire year?
6. A match box contains 127 matchsticks. How many matchsticks will be there in 2035 matchboxes.?
7. The airfare from Udaipur to Delhi is 8350 Rs. There are 135 passengers in an aeroplane. Then how much total amount will be received from the air fare?
8. Price of a sewing machine is Rs. 2452. Sheela purchased such 184 sewing machine for garment industry then how much money she spent?
9. Salary of a person is Rs. 3866 per month then what is the annual salary of the person.
10. A factory manufactured 5897 fans delhi then how many fans will be manufactured in 28 days?
11. Cost of a meter cloth is Rs. 289 then what is the cost of 6075 meter cloth?
12. In a garden there are 2745 plants of pomegranate. If 112 pomegranate are grown on a plant then how many pomegranate will be produce in the whole garden?

We Learnt and Understood - I



1. Write the number in word name –
 - (i) 3,210 -
 - (ii) 7,045 -
 - (iii) 1,999 -
 - (iv) 8,620 -
 - (v) 9,503 -
2. Write the expanded form of the number –
 - (i) 23890 (ii) 46005 (iii) 30142
 - (iv) 70910 (v) 15436 (vi) 88002
3. Find the place value of the digit 6 in the numbers –
 - (i) 64321 (ii) 78460 (iii) 96084
 - (iv) 34516 (v) 60124 (vi) 34760
4. Arrange and write the ascending order of the numbers –
 - (i) 43125, 31425, 21354, 24135
 - (ii) 64091, 60419, 61940, 69410
 - (iii) 72110, 71201, 71021, 70112
 - (iv) 89234, 82934, 89324, 82394
 - (v) 53400, 50340, 53004, 50430
5. Arrange and write the descending order of the numbers –
 - (i) 13425, 14325, 14235, 12435
 - (ii) 91023, 90132, 93210, 92130
 - (iii) 76501, 75061, 70516, 75106



(iv) 8409, 8904, 8049, 8490

(v) 56031, 56301, 53601, 65310

6. Numbers formed by using digits 3, 1, 6, 5 and 4 –

(i) The largest number -

(ii) The smallest number -

(iii) Difference of both the numbers -

7. Put the symbol $<$, $>$, $=$ in between the given numbers –

(i) 23145 24145

(ii) 67890 68890

(iii) 99999 99998

(iv) 12345 12346

(v) 45000 45000

(vi) 78412 78410

(vii) 32010 31020

(viii) 65432 65432

(ix) 20000 19999

(x) 87000 87001

(xi) 10010 10001

(xii) 34567 34657

8. Solve –

(i) Rohan had Rs. 1275. He purchased books for Rs. 789. How much Rs are left with him?

(ii) There are 435 boys and 392 girls in a school. How many total students are there ?

(iii) Ram has 2186 Rs. His father gave him 1345 rupees more. How much rupees Ram has?

(iv) There are 1245 books of Hindi, 987 of English and 965 Science books in a library. How many books are there in the library?

(v) Sonu had 2450 rupees. She purchased items of Rs. 1375. How much amount (rupees) is left with him ?

(vi) There were 1525 students in a school. After vacations only 1180 students came to school. How many students remained absent?





(vii) 3250 sacks were kept in a godown. 1875 sacks were taken out.
How many sacks are left in godown ?

9. Make angles of the following measurement with the help of protractor–

- (i) 15° (ii) 60°
(iii) 70° (iv) 120°

10. Multiply –

- (i) 3425×318 (ii) 1876×427
(iii) 2941×356 (iv) 1634×509

11. Write down the numbers before and after the following numbers–

- (i) 13379
(ii) 9999
(iii) 8780
(iv) 1189

12. A bus covers the distance of 185 km. daily. How much distance it covers in a month (30 days)?

13. A student reads 18 pages everyday. If he studies continuously for 45 days then find out how many pages will he read?

14. In a field 625 litre water is used for irrigation in a day. How much litre of water will be used for 60 days?

15. Devraj went to market with Rs. 2000. He spent Rs. 735 on text books and 315 Rs. on notebooks then find out how much amount is left with him?

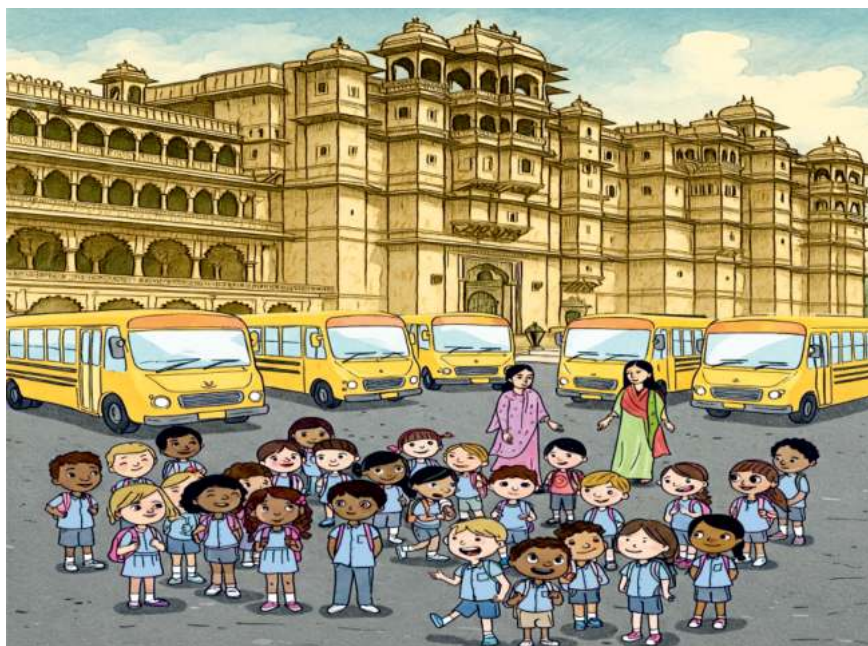


Lesson - 6

A Trip to the City of Lakes



A group of 120 students from a government Sr. Sec school Kota, along with 5 teachers, go on an educational tour to City Palace, Udaipur using five buses. For this Rs. 500 is collected from each student and Rs. 750 from each teacher.



How much total amount was collected for educational tour?

Number of student sitting in each bus

During the tour five teachers took responsibilities after forming equal groups of students to look after them.

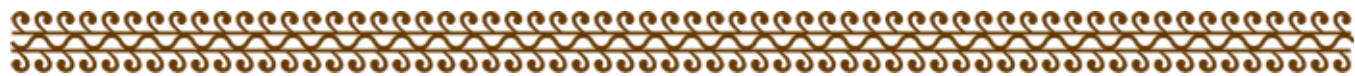
The number of students in each teacher's group

$$\begin{array}{r} 5 \overline{) 100 + 20} (20 + 4 \\ - 100 \\ \hline 00 + 20 \\ - 20 \\ \hline 00 \end{array}$$

$$120 \div 5 = 24$$

Find out– If one more teacher would have accompanied them then how many students did each teacher had.

$$6 \overline{) 120} ($$



For visiting City Palace every teacher purchased tickets of Rs 5625 in total.

After purchasing ticket a teacher named Vinod asked the students of his group - "what is the price ticket of a per person to visit the City Palace"?

Harshita find out rate of ticket per person in this way –

$$\begin{array}{r} 25 \overline{) 5625} \quad (100 + 100 + 10 + 10 + 5 = 225 \\ - 2500 \\ \hline 3125 \\ - 2500 \\ \hline 625 \\ - 250 \\ \hline 375 \\ - 250 \\ \hline 125 \\ - 125 \\ \hline 0 \end{array}$$

Devraj find out rate of ticket per person in this way –

$$\begin{array}{r} 25 \overline{) 5625} \quad (200 + 20 + 5 = 225 \\ - 5000 \\ \hline 625 \\ - 500 \\ \hline 125 \\ - 125 \\ \hline 0 \end{array}$$

What do you think about Harshita's and Devraj's method of taking out rate of per person's tickets

After visiting City Palace students were divided into two groups and sent for meal in different hotel.

After the meal of one group the teacher paid total amount of Rs 9675.

Look children I have paid the bill of 45 meals then find out the rate of each plate.



I did it in this way



Total amount paid for 45 plates = 9675

Amount paid for each plate of student = $9675 \div 45$



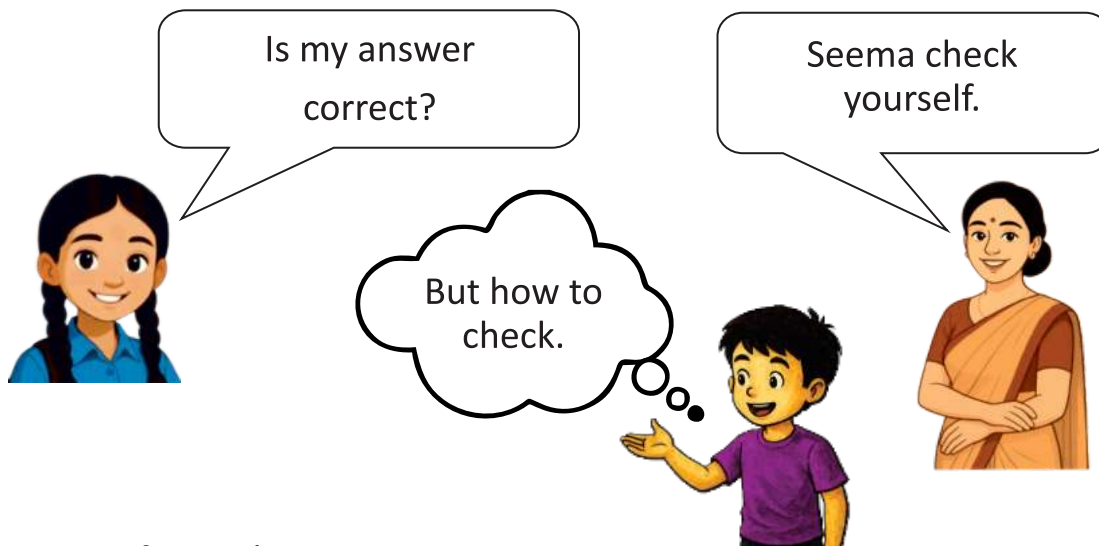
$$\begin{array}{r}
 215 \\
 45 \overline{) 9675} \\
 \underline{- 90} \\
 67 \\
 \underline{- 45} \\
 225 \\
 \underline{- 225} \\
 000
 \end{array}$$

In this way 215 Rs.
were paid for each plate.

Step 1 : 9 is smaller than 45, it is not divisible by 9 therefore dividing 96 by 45, $96 \div 45 = 2$, quotient is 2 remainder is 6.

Step 2 : With the remainder of 6 of step 1, taking 7 as tens digit it will be 67, so 67 divided by 45 i.e $67 \div 45 = 1$, quotient is 1 remainder is 22.

Step 3 : With the remainder of 22 of step 2 taking 5 of units, we get 225 so $225 \div 45 = 5$, quotient is 5 remainder is 5.



Teacher : This is very easy.

Multiply the divisor by the quotient and add the remainder to it. If this gives you the dividend then your answer is correct.

Do you know?

The number that divides is called the divisor and the number that is divided is called the dividend.

You have divided 9675 by 45 so 9675 is dividend and 45 is divisor.

Seema checked the answer like this-

When $9675 \div 45$ then quotient is 215 and remainder is 0. So, $45 \times 215 + 0 = 9675$

Therefore we can say that

$$\text{Divisor} \times \text{Quotient} + \text{Remainder} = \text{Dividend}$$



My answer is absolutely correct?

For 30 students 1800 Rs was fixed for their to and fro fare. What is the fare for each student?

Seema check this also.

$$\begin{array}{r} 6 \\ 30 \overline{) 1800} \\ \underline{- 180} \\ 00 \end{array}$$

Now 0 is left with us which is unit digit. What will we do of it?

$$\text{Dividend} = \text{Divisor} \times \text{Quotient} + \text{Remainder}$$

$$30 \times 6 + 0 = 180$$

Oh what is this ! This is not equal to divisor.



$$\begin{array}{r} 60 \\ 30 \overline{) 1800} \\ \underline{- 180} \\ 00 \\ \underline{- 0} \\ 0 \end{array}$$

When dividing the zero in the units place by 30, it will go zero times, and the quotient will be zero. Therefore, zero will be written in the quotient.

Seema checked it again-

$$30 \times 60 + 0 = 1800$$

Now the answer is correct.



Practice Work

Choose the correct answer-

1. What is value of dividend when $26845 \div 59 = 455$?
 (a) 455 (b) 59 (c) 26845 (d) 514 ()
2. $9468 \div 12 = \dots\dots\dots$ will be solved as ?
 (a) 788 (b) 798 (c) 789 (d) 799 ()
3. In $572 \div \dots\dots\dots = 44$ value of divisor is ?
 (a) 11 (b) 12 (c) 13 (d) 14 ()
4. In a mine in the month of April 5640 ton coal was obtained then find out how much ton coal will be obtained everyday?
 (a) 188 (b) 158 (c) 168 (d) 148 ()
5. Which number will be completely divided by 9 ?
 (a) 8468 (b) 9458 (c) 7468 (d) 9648 ()
6. Solve and check the answer—
 (Dividend = Divisor x Quotient = Remainder)
 (i) $495 \div 11$ (ii) $1092 \div 14$ (iii) $1280 \div 16$
 (iv) $725 \div 13$ (v) $800 \div 15$ (vi) $1820 \div 19$
7. Check the solutions of the questions and put (✓) and (x) where needed-

(i)

$$\begin{array}{r}
 13 \\
 5 \overline{) 515} \\
 \underline{- 5} \\
 015 \\
 \underline{- 15} \\
 \hline
 x
 \end{array}$$

(ii)

$$\begin{array}{r}
 109 \\
 7 \overline{) 763} \\
 \underline{- 7} \\
 06 \\
 \underline{- 0} \\
 63 \\
 \underline{- 63} \\
 \hline
 00
 \end{array}$$

- 
8. If maximum 50 passengers sits in a bus then –
 - (a) How many buses are required for 250 passengers ?
 - (b) Maximum how many passengers can be seated in 8 buses ?
 - (c) If 10 passengers sit in a jeep. Then the passengers of 3 buses will be seated in how many seats?
 9. If Manoj bought 18 books for Rs. 828 then how much he paid for one book?
 10. Ravindra had 636 mangoes, so how many dozens of mangoes he has?
 11. Raksha has 2052 beads of a Mala. He has to prepare a Mala having equal beads. How many beads will she use in one Mala?
 12. 576 chocolates has to packed in a box. If one box contains 24 chocolates, then how many boxes will be needed for all chocolates?
 13. Madan purchased 660 mango trees from nursery. He wants to plant 15 plants in every row of his field. In how many rows can he plant the plants.
 14. 150 bananas are equally distributed in 6 player of team-1 whereas 192 bananas are distributed in 6 players of team-2. Then find out which team players will get more and how many ?
 15. Fare of an ordinary bus for 6 passengers to Salumbar is Rs. 150, whereas the fare of an express bus for 6 passenger is Rs. 192. Find out the fair of which bus is more and how much?
 16. If cost of 15 bicycle is Rs. 24,405 then what is the cost of one bicycle?
 17. Product of two number is 4131. If one number is 27. Then find out the another number?
 18. Annual income of a person is 65520. Then find out the monthly income of the person?
 19. In a school there 1250 students. On republic day 6250 laddoos were distributed among the students. Find out how many laddoos were each student get?
 20. 124 passengers paid fare of Rs. 77500 of train from Jaipur to Delhi. Find out the fare of each passenger?
- 

Lesson - 7

Magic of Maths



Radha went to market with her mother.

Radha : Maa, today we will purchase apples.

Mother : (Shopkeeper). How many apples does a box contain ?

Shopkeeper : A box contains 24 apples.

Mother : How much does an apple cost ?

Shopkeeper : One apple costs Rs. 14.



Radha : Maa one apple costs Rs. 14, then what is the cost of 12 apples ?

Mother : 168 Rupees.

Radha : You have answered so quickly ! you are very intelligent. If one kg apple costs Rs. 99 then what is the cost 14 kg apples ?

Mother : Rs. 1386.

Radha : Maa ! I also want to learn to calculate quickly.

Mother : This is very easy. With the help of vedic maths you will be able to calculate quickly. We will study vedic maths in this chapter.

Now you Answer-

(1) If one apple costs Rs. 14 then what is the cost of 24 apples ?

(2) If cost of 1 kg. grapes is Rs. 98, then what is the cost of 15 kg grapes?

In previous classes we studied 'ekadhiken' ekadhiken purnen, eknunen, eknune purnen and param mitra digit and with the help of these we learnt addition and subtraction.

Come let us practice it again-

Ekadhik— 'ekadhik' means 1 more than a number. For eg. (·) This symbol is called ekadhik symbol. If a number is $\dot{2}$ then its ekadhik will be 3.

Find the ekadhik of given number –

$$\text{ekadhik of } 5 = (\dot{5}) = 5 + 1 = 6$$

$$\text{ekadhik of } 9 = \dot{9} + 1 = 10$$

$$\text{ekadhik of } 99 = 9 \dot{9} = 99 + 1 = 100$$

$$\text{ekadhik of } 49 = \dots\dots\dots = \dots\dots\dots$$

$$\text{ekadhik of } 33 = \dots\dots\dots = \dots\dots\dots$$

$$\text{ekadhik of } \dot{0} = 0 + 1 = 1$$

$$\text{ekadhik of } 1 \dot{2} = 12 + 1 = 13$$

$$\text{ekadhik of } 5 \dot{2} = \dots\dots\dots$$

$$\text{ekadhik of } 70 = \dots\dots\dots = \dots\dots\dots$$

$$\text{ekadhik of } 27 = \dots\dots\dots = \dots\dots\dots$$

Ekadhik Purven-

Ekadhik Purven means "one more than the previous one." This formula means one digit more than previous one. For eg. in number 29, the ekadhik purven of digit 9 will be 2 digit prior to 9 on 2 (·) ekadhik purven will be there. In the way ekadhik purven of number 9 will be $\dot{2}9$ and new number will be 39.

$$\text{ekadhik purven of } 7 \text{ in } \dot{1}7 = 17 = 27$$

$$\text{ekadhik purven of digit } 2 \text{ in number } \dot{3}2 = 32 = 42$$

$$\text{ekadhik purven of digit } 3 \text{ in number } \dot{1}35 = 135 = 235$$

$$\text{ekadhik purven of digit } 1 \text{ in number } \dot{0}107 = 0107 = 1107$$

$$\text{ekadhik purven of digit } 5 \text{ in number } 154 = \dots\dots\dots = \dots\dots\dots$$

$$\text{ekadhik purven of digit } 9 \text{ in } 279 = \dots\dots\dots = \dots\dots\dots$$

$$\text{ekadhik purven of digit } ६६ \text{ in number } ६ = \dots\dots\dots = \dots\dots\dots$$

$$\text{ekadhik purven of digit } १२८ \text{ in numbers } १ = \dots\dots\dots = \dots\dots\dots$$

When a number dose note have a whole number then 0 is placed at the left most position of the number

Eknuen–

‘Eknuen’ means one less than a number. For eg. If a number is 10 then its “eknuen” will be $1\underset{\cdot}{0} = 9$. Here symbol (.) will be used.

$$\text{Eknuen of } 9 = 9\underset{\cdot} - 9 - = 8$$

$$\text{Eknuen of } 20 = 2\underset{\cdot}{0} - 20 - 1 = 19$$

$$\text{Eknuen of } 45 = 4\underset{\cdot}{5} - 45 - 1 = \dots\dots\dots$$

$$\text{Eknuen of } 262 = 26\underset{\cdot}{2} = 262 - 1 = \dots\dots\dots$$

$$\text{Eknuen of } 87 = \dots\dots\dots = \dots\dots\dots - 1 = \dots\dots\dots$$

$$\text{Eknuen of } 75 = \dots\dots\dots = \dots\dots\dots = \dots\dots\dots$$

$$\text{Eknuen of } 90 = \dots\dots\dots = \dots\dots\dots = \dots\dots\dots$$

$$\text{Eknuen of } 124 = \dots\dots\dots = \dots\dots\dots = \dots\dots\dots$$

Eknuen Purven –

Eknuen purven means “one less than previous.” This formula says that one less than previous digit. For eg-in number 56, the eknuen purven of digit 6 in 56 then put (.) sign below digit 5 which is one less than digit 6 of 56. Eknuen purven = $5\underset{\cdot}$ 6 and new number = 46.

$$\text{Eknuen purven of digit 7 in } 372 = 3\underset{\cdot}{7} 2 = 272$$

$$\text{Eknuen purven of digit 0 in } 5210 = 52\underset{\cdot}{1} 0 = 5200$$

$$\text{Eknuen purven of digit २६ in the number ६} = २\underset{\cdot}{६} = १६$$

$$\text{Eknuen purven of digit 8 in } 168 = \dots\dots\dots = \dots\dots\dots$$

$$\text{Eknuen purven of digit 2 in } 425 = \dots\dots\dots = \dots\dots\dots$$

$$\text{Eknuen purven of digit 5 in } 115 = \dots\dots\dots = \dots\dots\dots$$

$$\text{Eknuen purven of digit ७ in } ६७२ = \dots\dots\dots = \dots\dots\dots$$

$$\text{Eknuen purven of digit 5 in } 2915 = \dots\dots\dots = \dots\dots\dots$$

‘Param Mitra Digit’ –

“Param mitra digit” are supplementary to each other. For eg. param



mitra digit of 1 is 9. ($1 + 9 = 10$), param mitra digit of 2 is 8 ($2 + 8 = 10$), param mitra digit of 3 is 7 ($3 + 7 = 10$), param mitra digit of 4 is 6 ($4 + 6 = 10$), param mitra digit of 5 is 5 ($5 + 5 = 10$).

Addition in Vedic Method –

$$\begin{array}{r} 6 \quad 5 \\ + \quad 2 \quad 9 \\ \hline 9 \quad 4 \end{array}$$

Hint-

1. Total of unit digit i.e. $5 + 9 = 14$
2. Here total 14 is more than 10 that's why write 4 in the sum and mark ekadhik symbol on digit 2 which is before 9 in number 29.
3. Total of tens digits $6 + \overset{\cdot}{2} = 6 + 3 = 9$.

Add the following by ekadhiken purven-

$$\begin{array}{r} 4 \quad 5 \quad 6 \\ + \quad 5 \quad 6 \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 8 \quad 7 \\ + \quad 5 \quad 7 \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 7 \quad 6 \\ + \quad 5 \quad 8 \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \quad 3 \quad 0 \\ + \quad 3 \quad 2 \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 0 \quad 1 \\ + \quad 6 \quad 8 \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 8 \quad 7 \\ + \quad 4 \quad 8 \quad 5 \\ \hline \end{array}$$

Subtraction with vedic method -

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

Hint :

1. 7 is not subtracted from 2 so we will add param mitra digit of 7 ie 3, Now after adding 3 in it will become 5 at quotient and in number 582 we mark (.) eknunenen sign below 8 which is before 2
2. In the same way 9 is not subtracted from 7, so the param mitra digit of 9 is 1, add 1 to 7 and write 8 in reminder the we put (.) eknunen sign below digit 5 which is previous to 8.
3. 5 means substract 1 from 4 and write 3.



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

Charam digit and Nikhilam digit-

The unit digit of any number is called charam digit and the remaining digit are called Nikhilam digits. eg. In 912, 2 is charam digit and 9 and 1 is nikhilam digits.

Multiplication Opertion –

Deviation– In vedic maths 10,100 and 1000 are considered bases. If basis are subtracted from number, the answer left is called deviation. If the number is smaller than base then deviation is negative and if bigger than it is called positive deviation.

When base is 10

Number	Deviation
8	- 2
12	+ 2
7	- 3
14	+ 4

When base is 100

Number	Deviation
103	+ 03
108	+ 08
९२	- ०८
९६	- ०४

When base is 10 –

Deviation of number 15 = Number – base = 15-10=5 (posture deviation)

Deviation of number 8 = 10 = - 2 negative deviation

Deviation of number 12 = 12 deviation

Deviation of number 6 = 6 deviation

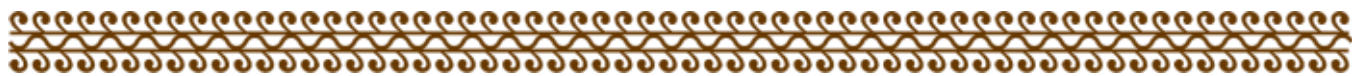
Find deviation -

When base is 10

Number	Deviation
Deviation of 15	
Deviation of 18	

When base is 100

Number	Deviation
deviation of १०५	
deviation of ११४	



Deviation of 7		deviation of ୧୩	
Deviation of 13		deviation of ୨୨୩	
Deviation of 4		deviation of ୭	

Radha's mother after returning home taught Radha to multiply different method-

13 x 12

nearest base = 10

Number	Deviation
--------	-----------

13	+ 3
----	-----

12	+ 2
----	-----

therefore product = 15/6
= 156

Step :

1. We find and write the deviation of both numbers from the nearest base.
2. Write multiplication in two parts eg. one Number + deviation of second/product of deviations.
3. $13 + 2 / + 3 \times 2$ or $12 + 3 / (+2 \times 3)$
4. Place as many digits on the right side as there are zeros in the base and if they are more then add in left side.
5. Now combine/add both parts.

Radha : Maa! How did you solve this multiplication ?

Mother : This is method of vedic maths. This method is called Nikhilam sutra formula. In it if the number is near to 10, 100 or 1000, we use this method and multiply.

Eg- 13 and 12 both the numbers are near to 10. 13 is 3 more than 10 and 12 is 2 more than 10 then deviation of 13 is 3, which is written in front of 13 and deviation of 12 is 2, which is written in front of 12.

Method : We have to multiply two numbers, choose the nearest base number 10 or 100. On this basis find deviation and write deviation number in front. Then multiply both the.

(i) If the base is 10 we write one digit of the product of deviations on





the right side, and if the base is 100, we write two digits on the right side. The remaining digits of the product are added to the left side.

- (ii) If the product of deviation is negative then we will take one carry over from left side and change it to positive number.

eg- 13×15

Number	Deviation
--------	-----------

13	+ 3
----	-----

15	+ 5
----	-----

= $18 / + 15$

= $18 + 1 / 5 = 195$

Step :

1. Base 10, deviation + 3 and + 5
2. Product of deviation = $3 \times 5 = 15$
3. On left side in $13 + 5 = 18$ or $15 + 3 = 18$
4. From the number 15 on the right side, the tens digit 1 is added to the left side. Since the base is 10, only one digit. Will be written on the right side and the other digit (1) will be added to the left side.
5. In last we write after removing divisor sign (/).

eg- 13×7

Number	Deviation
--------	-----------

13	+ 3
----	-----

7	- 3
---	-----

= $13 + (-3) / (+3) \times (-3)$

= $10 / - 9$

= $10 - 1 / 10 - 9$

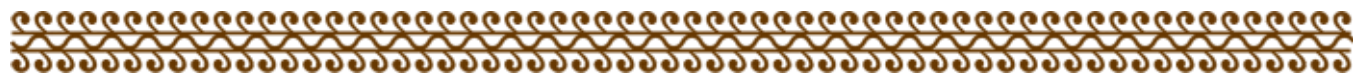
= $9 / 1$

= 91

Step :

1. Base 10, deviation + 3 and - 3
2. Product of deviation = $3 \times (-3) = -9$
3. On left side in $13 - 3 = 10$ or $7 + 3 = 10$
4. We will take 1 as carry over from left side to right side number and make it positive.
5. Left side $10 - 1 = 9$, Right side $10 - 9 = 1$, 1 from tens as carry over will come from right side to left side (1 tens = 10 unit) then $10 - 9 = 1$ remainder.





eg- 105×106

Step :

Number Deviation

105 + 5

106 + 6

= $105 + 6 / (+5) \times (+6)$

= $111 / + 30$

= 11130

1. Base 100, deviation + 5 and + 6

2. Product of deviation = $5 \times 6 = 30$, write on right side.

3. $105 + 6 = 111$ or $106 + 3 = 111$, write on left side.

4. Base 100 has 2 zeros so on right side. We will write 2 digits.

5. At last remove divisor sign(/) and write.

eg- 112×90

Step :

Number Deviation

112 + 12

90 - 10

= $112 + (-10) / 12 \times (-10)$

= $102 / (-120)$

= $102 - 1 / (100 - 120)$

= $101 / (-20)$

= $101 - 1 / (100 - 20)$

= $100 / 80 = 10080$

1. Base 100, deviation + 2 and is + 10.

2. Product of deviation will be $= 12 \times -10 = -120$, as there are 3 digit, we will write -20 at right side and hundreds digit -1 will be added left side.

2. On left side write $112 - 10 = 102$ or $90 + 12 = 102 - 1 = 101$.

3. For changing negative number of right side to positive number we take one carry over from left side to right side and make it positive . carry over at left side (1 hundred = 100 unit) Therefore, $100 - 20 = 80$ will be written on right side.

Multiply using Nikhilam sutra (base 10 or 100) –

(i) 11×11

(ii) 12×8

(iii) 101×105

(iv) 102×98

(v) 93×97

(vi) 9×7

(vii) १२×१५

(viii) १०७×१०९

(viii) १०४×२७

Multiply by one ‘Nunen Purven’-

Radha’s mother multiplied using another method called ‘ek Nunen





Purven' - $14 \times 99 = 1386$.

Radha asked her mother, how did you do this multiplication so early ? Is is a magic ?

Mother said, it is not a magic, we can solve this by vedic maths system.

$$= 14 \times 99$$

$$= 14 / (99 - 14)$$

$$= 13 / 99 - 13$$

$$= 13 / 86 = 1386$$

In it firstly we will do ek nuen of 14, then the digit (after ek nuen will be subtracted from 99).

In this way if we multiply any number by 9,99,999, then we make that number ek nuen and subtract that ek nuen number from 9,99,999

Example - 1

Step :

Number Deviation

$$15 \times 99$$

$$= 15 - 1 / 99 - 15$$

$$= 14 / 99 - 14$$

$$= 14 / 85$$

$$= 1485$$

1. ek nuen of 15 will be 14.

2. 14 which is ek nuen of 15 will be subtracted by 99.

3. When join both the number we will get product.

Example - 2

Step :

Number Deviation

$$345 \times 999$$

$$= 345 / 999 - 345$$

$$= 344 / 999 - 344$$

$$= 344 / 655$$

$$= 344655$$

1. ek nuen of 345 is 344.

2. 344 the ek nuen number of 345 will be subtracted from 999.

3. By joining both numbers we will get the product.



Practice Work

1. Write deviation on the base of 10 -
 (i) of 12 (ii) of 18 (iii) of 6 (iv) of 9
2. Write ekadhiken purven -
 (i) 89 of 9 (ii) 125 of 2
 (iii) 76 of 7 (iv) 703 of 3
3. Write ekadhik.
 (i) of 8 (ii) of 12 (iii) of 17 (iv) of 37
4. Write deviation on the base of 100 -
 (i) of 109 (ii) of 115 (iii) of 112 (iv) of 98
5. Write Param mitra digit of the numbers -
 (i) 5 (ii) 7 (iii) 8 (iv) 6
6. Write one Nuenen purven –
 (i) in number 748 of 8
 (ii) in number 68 of 8
 (iii) in number 7432 of 2
 (iv) in number 843 of 4
7. Addition with ekadhiken purven -

$$\begin{array}{r} \text{(i)} \quad 7 \quad 2 \quad 4 \\ + \quad 2 \quad 6 \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(ii)} \quad 8 \quad 9 \quad 4 \\ + \quad 2 \quad 6 \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(iii)} \quad 7 \quad 8 \quad 4 \\ + \quad 3 \quad 2 \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(iv)} \quad 8 \quad 9 \quad 0 \\ + \quad 2 \quad 4 \quad 6 \\ \hline \end{array}$$

8. Subtract with the help of nuenen purven and param mitra digit -

$$\begin{array}{r} \text{(i)} \quad 9 \ 5 \\ - \quad 3 \ 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(ii)} \quad 7 \ 4 \ 3 \\ - \quad 6 \ 2 \ 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(iii)} \quad 6 \ 3 \ 4 \\ - \quad 2 \ 4 \ 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(iv)} \quad 4 \ 3 \ 2 \ 5 \\ - \quad 1 \ 2 \ 3 \ 6 \\ \hline \end{array}$$

9. Multiplication with nuenen purven mehod -

$$\text{(i)} \ 11 \times 99$$

$$\text{(ii)} \ 57 \times 99$$

$$\text{(iii)} \ 325 \times 999$$

$$\text{(iv)} \ ୨୩ \times ୯୯$$

$$\text{(v)} \ ୩୪୨ \times ୯୯୯$$

$$\text{(vi)} \ ୫୮ \times ୭୫$$

10. Multiply with nikhilam formula (sutra) -

$$\text{(i)} \ 117 \times 103$$

$$\text{(ii)} \ 104 \times 92$$

$$\text{(iii)} \ 102 \times 109$$

$$\text{(iv)} \ 95 \times 105$$

$$\text{(v)} \ ୧୦୭ \times ୨୦୯$$

$$\text{(vi)} \ ୧୦୪ \times ୯୭$$

Lesson - 8

Hot Parathas



Himani and Manan's mother is preparing aloo parathas for them. Mother has just started preparing paratha, then Himani said, mummy give me the first paratha. After listening Himani, Manan also asked for the same.



Manan divided the paratha into two equal part and give one part to Himani.

How much part of paratha did Himani eat ?

Here two equal part of one paratha   it means half I which can be read as one by two or $\frac{1}{2}$.

Himani half i.e. $\frac{1}{2}$ part of paratha.



If we have to divide and give equal part among four children, then how much portion will each child get ?

If mummy has prepared 5 parathas in total then find out how much will both of them get equally?

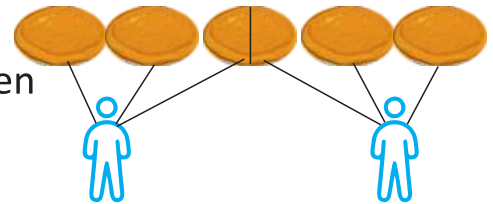
As 5 parathas has to be divided into 2 children

i.e. $\div$ =

It can be read as $5/2$.

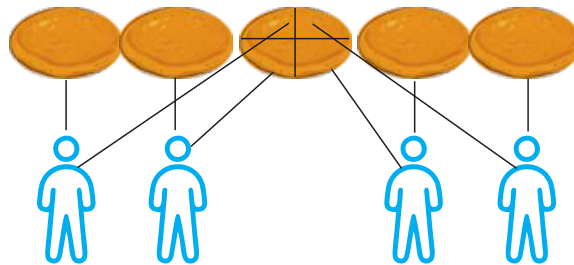
that means each one will get parathas = 2 and half.

Which is called 2 by 5 or two and half.



Let us practice –

1. You divide these 5 parathas in 4 children.

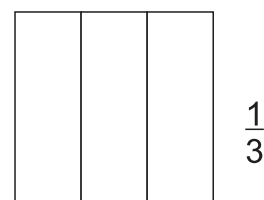
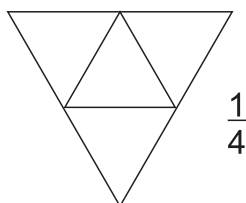
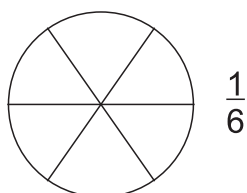


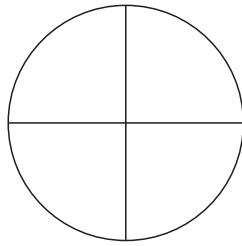
5 parathas divided into 4 children mean – $\div$ =

Each child will get parathas =

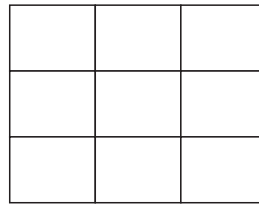
This can be written as one fourth.

2. How many paratha will each child get when 4 parathas has to be divided into 3 children ?
3. In the given picture colour the portion according to what is written-





$\frac{3}{4}$

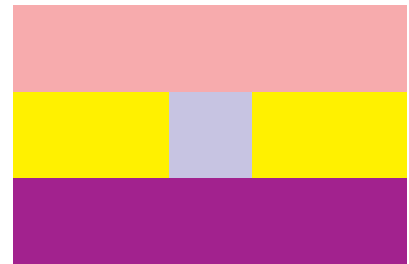


$\frac{4}{9}$

Look at shape of 3 colours and answer-

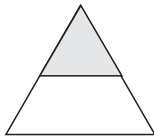
How much part of this shape is filled with pink colour?

Is the $\frac{1}{3}$ part in this shape coloured yellow? If not then how much?



Are the different fraction shown correctly in the given pictures? Identify them.

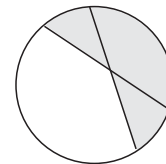
this is $\frac{1}{2}$



this is $\frac{1}{4}$



this is $\frac{3}{4}$



Can $\frac{1}{2}$ be represented on number line?



Yes, Himani we can, because $\frac{1}{2}$ is more than 0 and less than 1 that is why first of all we will make a number line 0 to 1.



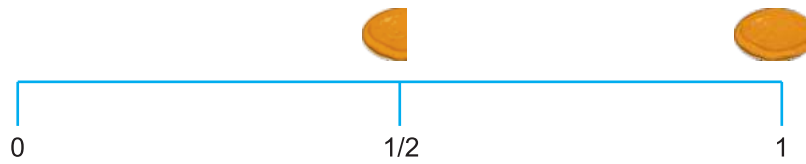
If this line is divided into two equal parts then the each part will be $\frac{1}{2}$.



Think – How many $\frac{1}{2}$ will join to become one ?

To make one how many $\frac{1}{4}$ are needed? How many $\frac{1}{5}$ parts will be there? How many $\frac{1}{20}$ parts will be there ?





It means to represent $\frac{1}{3}$ we have to divide the line in 3 equal parts in this way.



Yes, Himani you are right. Can you represent $2\frac{1}{4}$ on number line?



Now we will do 4 equal parts in between 2 and 3 because $\frac{1}{4}$ means one fourth part and after 2 count $\frac{1}{4}$ part which will make $2\frac{1}{4}$.



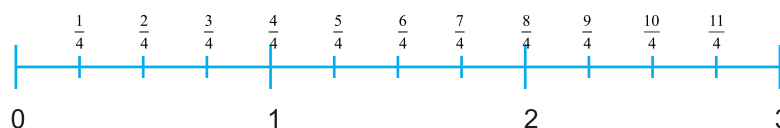
But brother on this number line $\frac{7}{4}$ and $\frac{11}{4}$ be marked ?



Manan : Look in $\frac{7}{4}$ and $\frac{11}{4}$ we have to represent seven fourth part and eleven fourth part on line. For this we have to make four equal part of very unit.

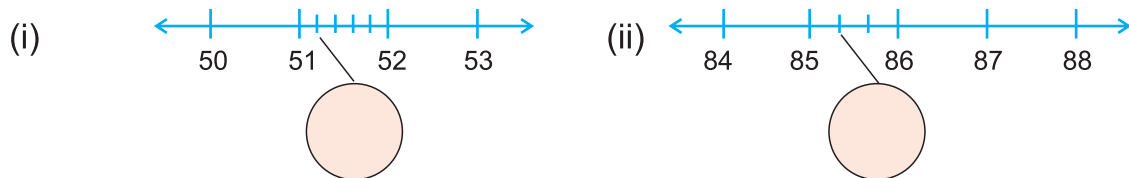


Now every part is one fourth so we will count it this way.



On number line in place of $2\frac{1}{4}$ what is represented ?

Look at number line and write the number in the circle.



Do it -

Make number line in your notebook and represent these fractions.

$$3\frac{1}{4}, 4\frac{1}{2}, 2\frac{3}{4}, \frac{9}{2}, \frac{14}{3}, \frac{8}{2}$$

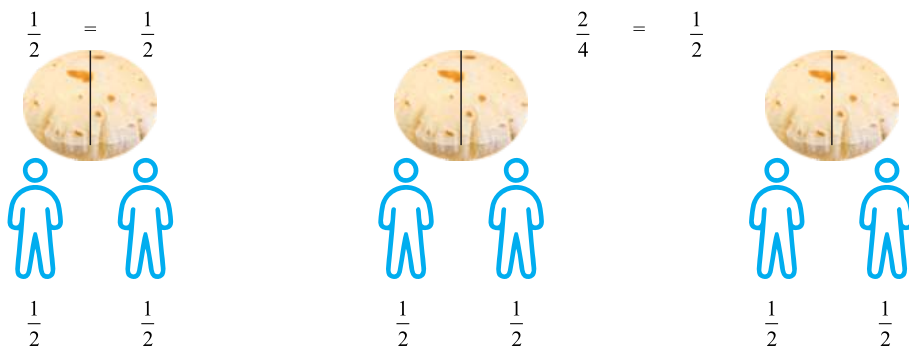
Think— How many measurement fraction numbers are there in between two numbers. Next day when Manan went to school, the maths teacher make picture of chapatis on board and said- In first picture one chapati has to be equally divided between two children and in second picture two chapatis into four children.



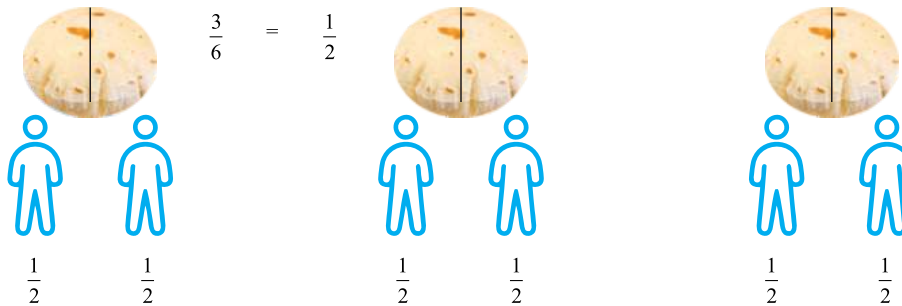
Manan divided first one chapati into two children equally. Then the chapatis of another picture among 4 children in this way.

Did the children of both the pictures get equal (half) parts of Chapaties?

Teacher divided 3 chapaties among 6 children equally in this way.



If 3 chapaties are divided into children equally then how many chapaties will each child get?



Think and Answer –

Divide 100 chapaties in 200 children equally and answer how much portion each gets?

You have seen that $\frac{1}{2}$, $\frac{2}{4}$, and $\frac{3}{6}$ condition all children got half part of chapati i.e. $\frac{1}{2}$ part. So $\frac{1}{2}$, $\frac{2}{4}$, and $\frac{3}{6}$ all are equal in parts.

Which means $\frac{1}{2} = \frac{2}{4} = \frac{3}{6}$

All such fraction numbers which are equal to each other are called equivalent fractions.

Do yourself and find out –

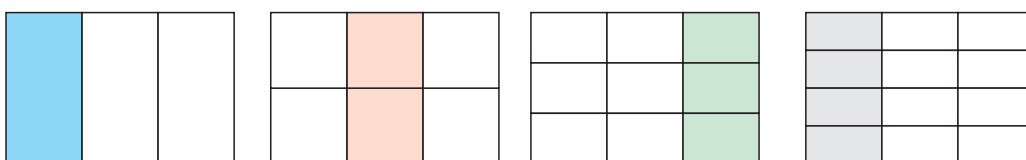
If 1 bread has to be divided among 3 children equally then each child will getpart.

If 2 breads have to be divided among 6 children equally, then each will getpart.

If 3 breads have to be divided among 9 children equally, then each will getpart.

Is the part of bread given to the children in all the condition equal? If yes, then write the part they got.

Write the fractions of given figures and answer whether all the fractions are equivalent fraction or not ?





Look at the picture. Each yellow colour piece is which part of the strip ? write.
Write which part of the strip one piece of each coloured strip represents.

1							
$\frac{1}{2}$				$\frac{1}{2}$			
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

How many one – fourth will make half ?

How many $\frac{1}{8}$ will make $\frac{1}{4}$?

How many $\frac{1}{8}$ are there in $\frac{1}{2}$?

Fraction numbers are written in $\left(\frac{\text{numerator}}{\text{denominator}} \right)$

$$\frac{2}{4}, \quad \frac{4}{6}, \quad \frac{6}{8}, \quad \frac{8}{10}$$

Can we change any fraction number to equivalent fraction by multiplying numerator and denominator by same number ?

Do you see any pattern in these numerator and denominator of these fractions?



Let's try it -

$$(a) \frac{1 (\times 2)}{2 (\times 2)} = \frac{2}{4}$$

$$(b) \frac{2 (\times 2)}{3 (\times 2)} = \frac{4}{6}$$

$$(c) \frac{1 (\times 4)}{2 (\times 4)} = \frac{4}{8}$$

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

$$\frac{2}{3} = \frac{4}{6}$$

$$\frac{1}{2} = \frac{4}{8}$$

Find equivalent fraction in fun –

Take a rectangular or square piece of paper. Fold it into two equal parts and colour one part.

Then fold the already folded half into two equal parts again.

Now unfold the paper and see into how many parts the paper is divided and how much of the paper is coloured ?

You will find that in both the cases the colored portion of the paper are equal.

Some children say $\frac{1}{2}$ and some say $\frac{2}{4}$ which is equal.

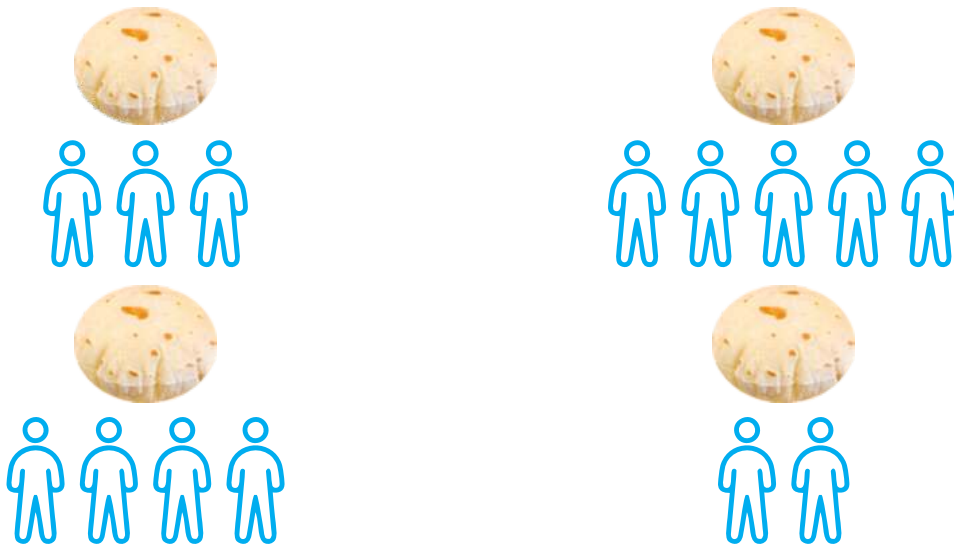




Similarly, half colored paper if folded into 6 or 8 equal folds then what will happen ?

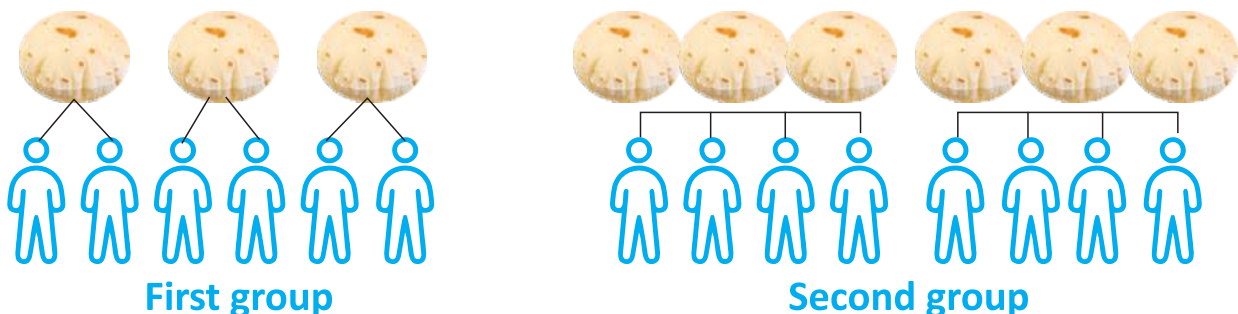
If 1 chapati is divided into group of 2, 3, 4 and 5 children in equal part then answer ?

1. Each child of which group will get minimum chapatis ?
2. Each child of which group will get maximum chapatis ?



3. How many Children of each group will get approximate. how many chapatis ?

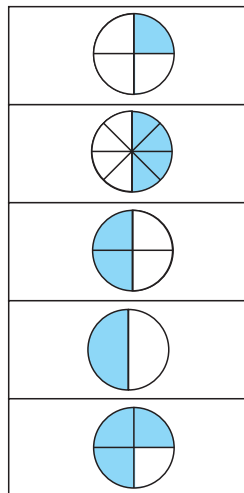
If in first group 6 children gets 3 chapatis whereas in second group, eight children gets 6 chapatis then how many chapatis will children of both the groups get ?



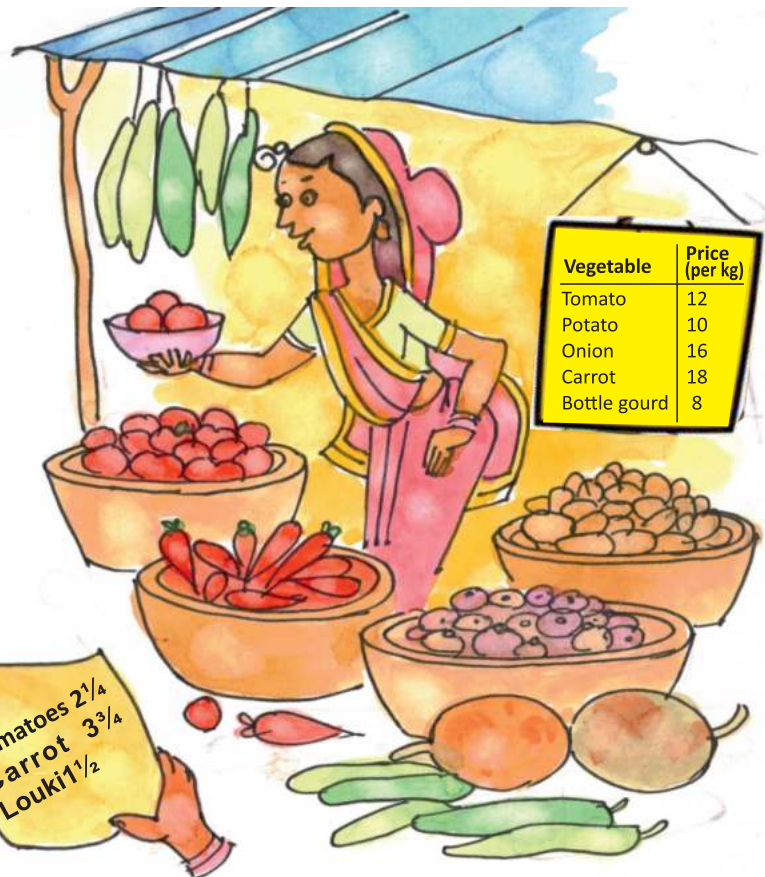
Each child of group-1 will get $\frac{1}{2}$ (half) chapati whereas each child of group-2 will get $\frac{3}{4}$ (three fourth) chapati.

Match-

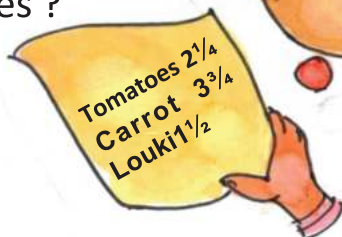
$\frac{1}{2}$
$\frac{2}{4}$
$\frac{3}{4}$
$\frac{1}{4}$
$\frac{4}{8}$



Look at Himani's list and rate list and answer –



- cost of 2 kg tomatoes ?
- cost of $\frac{1}{2}$ kg tomatoes ?
- cost of $2\frac{1}{2}$ kg tomatoes?
- cost of $3\frac{1}{2}$ kg — potatoes will be ?
- cost of purchasing $4\frac{3}{4}$ kg bottle gourd (louki) ?



Himani's List

- (f) Work at the purchase list in Himani's hands. If she has purchased according to the list, then how much amount she has to pay ?
- (g) The vegetable you want to purchase prepare a bill of them and also state the amount paid.

Practice Work

- Show the relation between the fractions using appropriate sign $<$, $=$, $>$.
(i) $\frac{1}{2}$ $\frac{1}{3}$ (ii) $\frac{1}{3}$ $\frac{1}{4}$ (iii) $\frac{2}{3}$ $\frac{3}{4}$
(iv) $\frac{1}{2}$ $\frac{2}{4}$ (v) $\frac{2}{5}$ $\frac{4}{5}$ (vi) $\frac{2}{4}$ $\frac{3}{6}$
- Write the following fractions in words.
(i) $\frac{3}{6}$ (ii) $\frac{3}{4}$ (iii) $\frac{1}{4}$ (iv) $\frac{1}{2}$
- How many students are there in your class ? Write number of students boys and girls in fraction.
- Shivani was taking 8 glasses in a tray. When the tray fell, 3 glasses broke. So, tell what fraction of glasses got broken ?
- Leela got a dozen bananas from market. She ate half bananas find out remaining bananas ?
- Gopal is 8 toffees. He gave $\frac{3}{4}$ toffees to his friends. Now how many toffees remaining with Gopal ?
- Mona has a story book of 24 pages. She has read 12 pages out of it. How much portion of book has she read ? If Mona read 6 more pages the next day then how much portion she has read now ?

Lesson - 9

Silver Brick

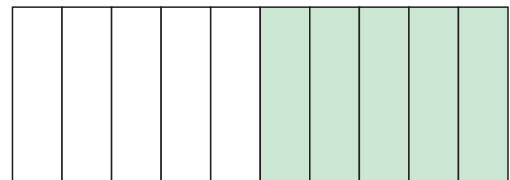


A farmer while digging his fields found a silver brick. He took it home and decided to give half of it to his sister.



So, he divided the brick into two equal parts and gave one part to his sister.

Now, he had half of the brick left. He divided this remaining half into 5 equal parts, and gave 1 part out of 5 to his son who lives in the city.



How much of the whole brick did the farmer give to his son ?

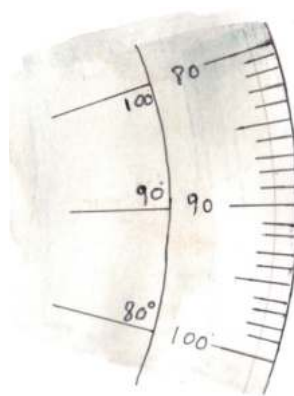
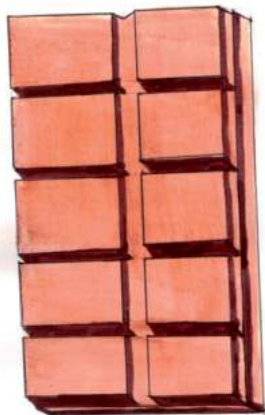
He did equal part of the half brick.

Fifth part of half brick which mean part of full brick.

It means the farmer gave $\frac{1}{10}$ part of brick to his son.

The farmer gave two parts to his daughter and three parts still with him.

The daughter got / 10 parts of full brick and the farmer kept / 10 part of full brick.

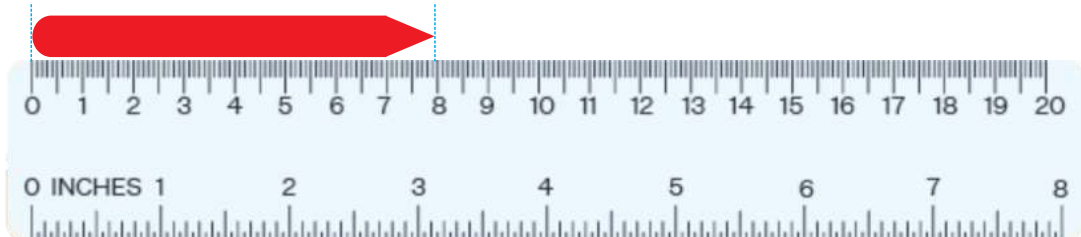




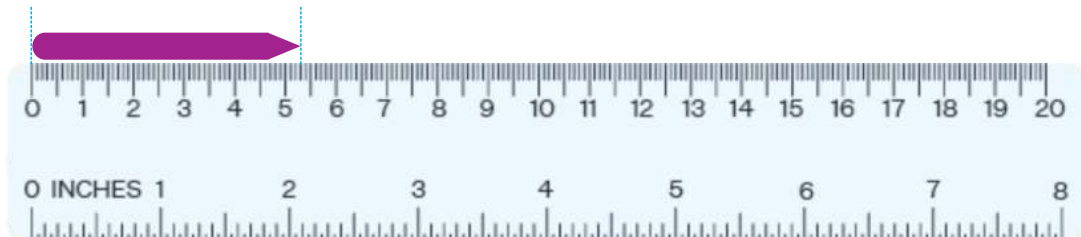
Now think how much of the 10 parts of the whole brick did the farmer give to his sister?

Where else have you seen ten equal parts been divided?

Reena has wax colors (crayon) which keeps getting shorter as she colors. Look, the red crayon is 8cm. long.



The Purple one has worn down more. How long is the purple crayon? This is just a little longer than 5cm. The red crayon is three mark longer than 5cm.

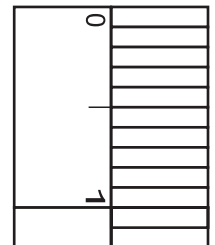


One centimeter is divided into 10 equal parts on the scale. Each part is equal to 1 millimeter which means one – tenth of a centimeter is 1 millimeter.

$$\frac{1}{10} \text{ Centimeter} = 1 \text{ millimeter}$$

$$\text{or } 0.1 \text{ Centimeter} = 1 \text{ millimeter}$$

It is also called zero point one centimeter.



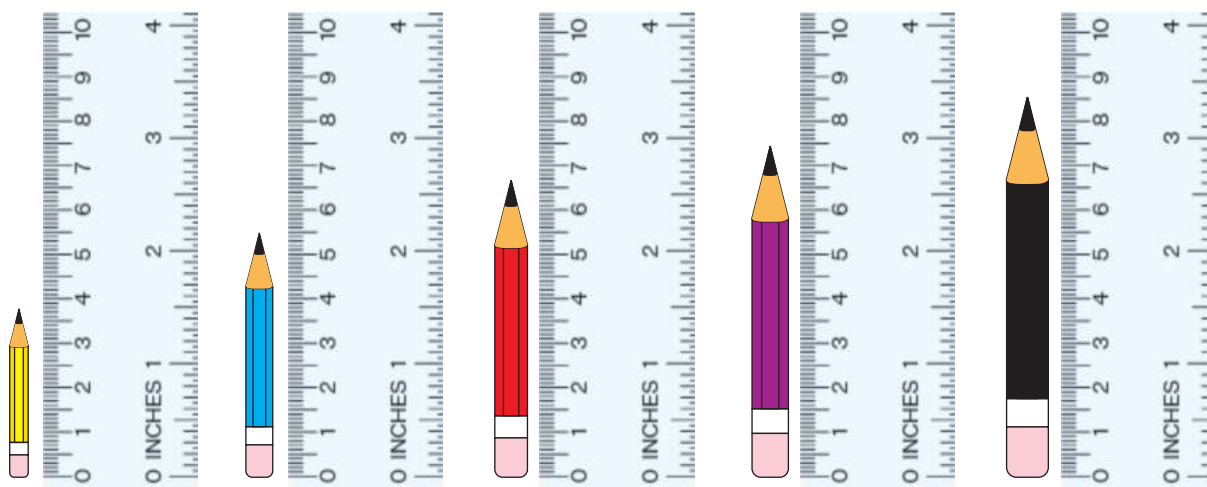
The digit written right side of the decimal point represents one which means purple color is 5 centimeter 3 millimeter or 5centimeter and $\frac{3}{10}$ centimeter.

Write colored part in millimeter and centimeter.





Milimeter	2				
Centimeter	0.2				



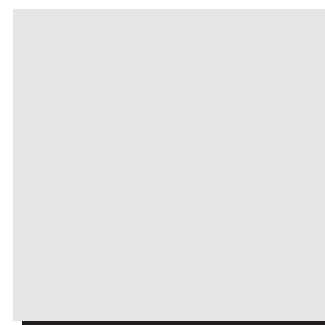
Pencil	Measurement of pencil
Yellow color	3.7 centimeter
Blue color	
Red color	
Purple color	
Black color	

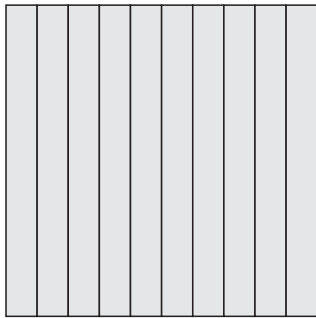
Tenth and hundredth part

Let us take a square shaped card sheet .It is complete unit.

If it is divided into equal strips then every strip will be tenth part.

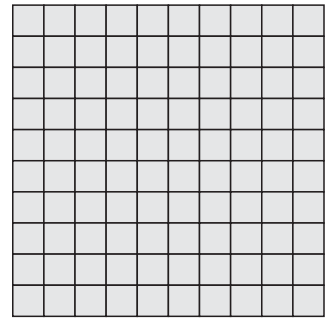
It can be written as $\frac{1}{10}$ or 0.1





Divide one whole unit into 100 equal parts. Each part will be one hundredth of the whole unit. This is called a hundredth.

It is written as $\frac{1}{100}$ or 0.01 and is read as zero point zero one.



1. By looking at grids answer how many tenths make one unit?
2. How many hundredths make one whole unit?
3. Can you write in decimal form how much part of the silver brick the farmer gave of his sister and son, and how much part he kept for himself?

Fill the table –

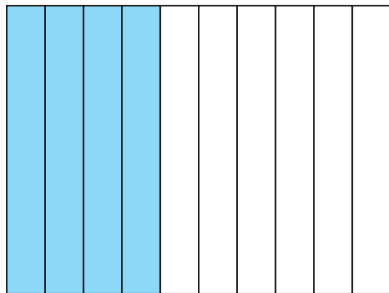
Part	Shaded part		Blank part	
	Fraction	Decimal	Fraction	Decimal
	$\frac{2}{10}$	0.2	$\frac{8}{10}$	0.8



	$\frac{8}{100}$	0.08	$\frac{92}{100}$	0.92

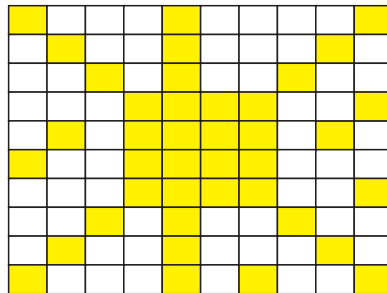
1. How many hundredths make 1 tenth?
2. Are two tenths equal to twenty hundredth?

3. How much more is one tenth one hundredth?
4. How many more tenths are needed with one tenth to make a whole?



4 Tenth

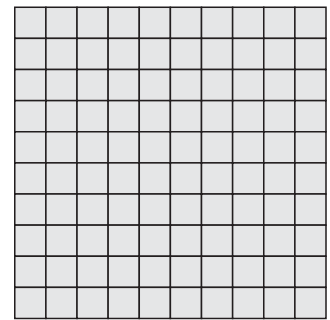
$$\frac{4}{10} = 0.4$$



40 Hundredths

$$\frac{40}{100} = 0.4$$

4 tenth and 40 hundredths are equal



Complete unit

4 tenths and 40 hundredths are equal.

In this way, we can represent decimal numbers using strips (tenths) and grids (hundredths) for eg. 1.21 can be represented according to the table.

One decimal two one			
Complete	Decimal	Tenths	Hundredths
1	.	2	1

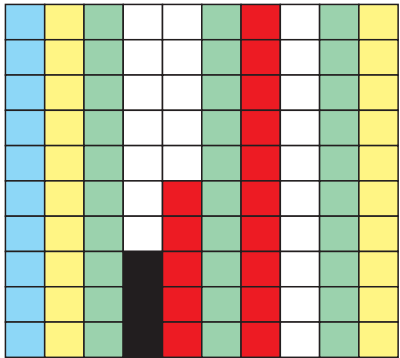
Fill the table -

Decimal numbers	Fraction number
0.2	$\frac{2}{10}$
.....	$\frac{20}{100}$

Decimal numbers	Fraction number
0.38	
.....	$\frac{52}{100}$



How much part is filled with which color? Answer the decimal value-

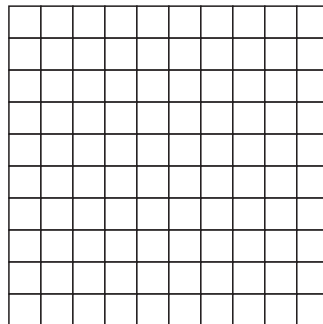


Color	Fraction	Decimal
Red	$\frac{15}{100}$	
Yellow		
Green		
Blue		

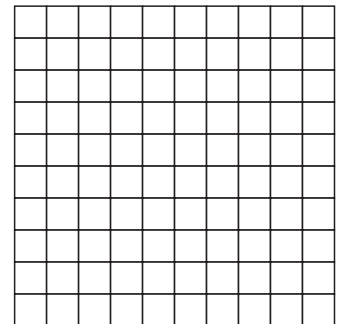
Draw a grid of 100 boxes in your math notebook and solve it.

- (i) Fill color of your choice in 0.25 part of grid -1 and 0.3 part in grid-2 and then compare which colored part is greater?

Grid-1

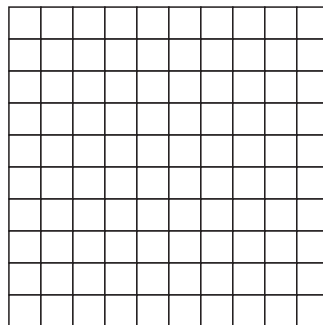


Grid-2

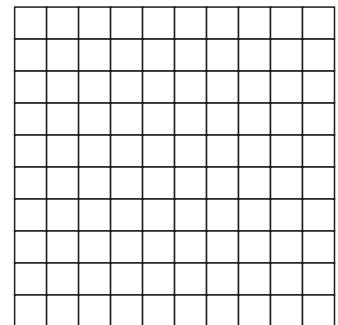


- (ii) Fill color of your choice in 0.40 part of grid -1 and 0.42 part of grid-2 then compare which colored part is smaller?

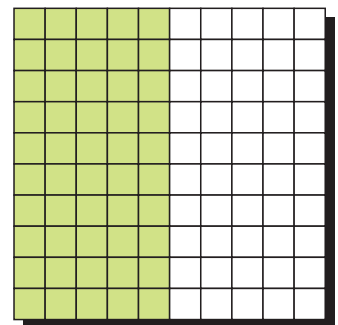
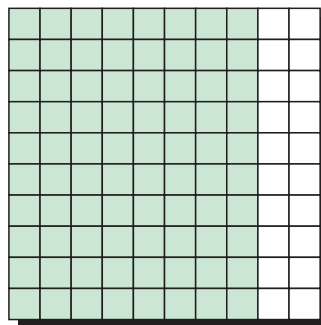
Grid-1

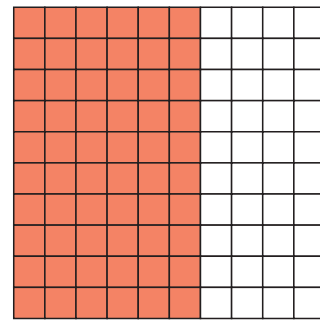
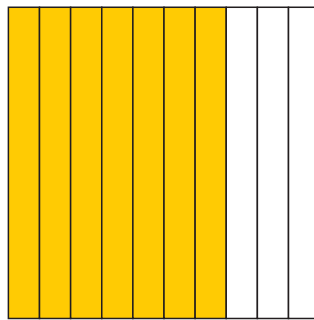
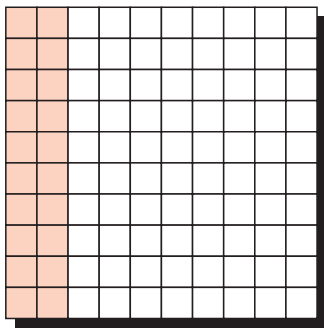


Grid-2



Write decimal number for shaded part -





Let us identify smaller and greater decimal numbers-

Thousand	Hundred	Tens	Unit	Tenths	Hundredths
1000	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$
← Increment				Decrement →	

It is clear from the table above that changing one place from right to left increases the value of the digit by 10 times, and conversely, changing one place from left to right decreases the value of the digit to $\frac{1}{10}$ times (tenth part).

Example- 0.7 and 0.07 the value of 0.7 is more.

$$0.7 = \frac{7}{10} \text{ and } 0.07 = \frac{7}{100}$$

Step 1 : Change decimal number into fraction.

Step 2 : The denominators of both fractions are different. Therefore to make them equal, we will multiply both the numerator and denominator of the fraction $\frac{7}{10}$ by 10. $\frac{7 \times 10}{10 \times 10} = \frac{70}{100}$

Step 3 : Compare the numerators of both fractions. Here the value of numerator of $\frac{70}{100}$ is more than $\frac{7}{100}$

$$\text{so } \frac{70}{100} > \frac{7}{100} \text{ and } 0.7 > 0.07$$





Compare the following decimal numbers and put the appropriate sign

<, >, =

(i) 5.7 5.07 (ii) 3.45 3.54

(iii) 8.09 8.9 (iv) 0.87 0.87

Practice Work

1. Fill in the blanks -

(i) Each part of a paper strip divided into 10 equal parts is called

(ii) 10th part of 1 centimeter is

(iii) One square of a graph paper divided into 100 equal parts is called a

(iv) 100 millimeter is equal to centimeter.

2. Write a decimal number as a fraction-

(i) 0.37 (ii) 0.023 (iii) 1.78 (iv) 0.28

3. Write the given fractions in decimal-

(i) $\frac{6}{10}$ (ii) $\frac{105}{100}$ (iii) $\frac{2087}{1000}$ (iv) $\frac{4}{100}$

4. Write the given decimal numbers in words -

(i) 4.236 (ii) 29.86

(iii) 0.28 (iv) 234.007



Lesson - 10

I should also Know



Radha went to the forest for a walk. There were tall trees and colourful flowers were blooming. She saw that there were some strange marks made on the trees. Those marks were like - a round circle, then a triangle, then a round circle, then a triangle.....

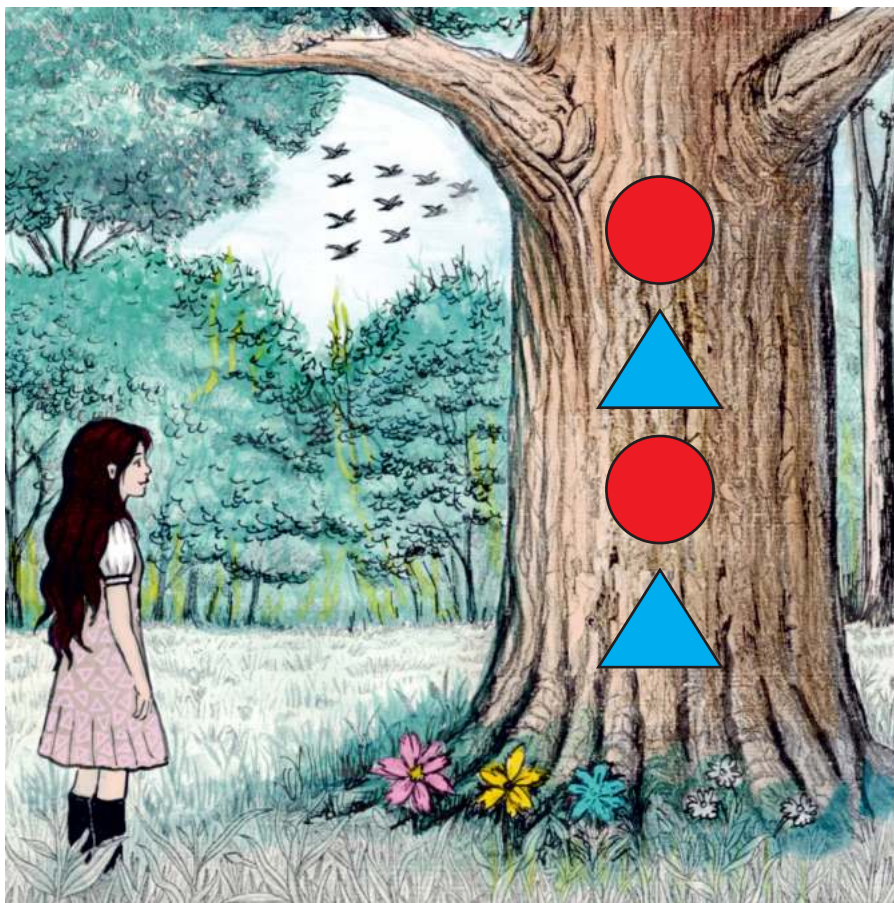
Radha was very surprised to see this. She wondered, who could have made these marks? She saw that

the marks were made in a particular order. She wondered, is this a pattern?

Radha walked further into the forest and saw that somewhere there was a pattern of flowers, somewhere of stones and somewhere of flying birds.

She thought, this forest is magical. Here, there is a pattern everywhere.

Patterns are not just in the forest, but everywhere. There are patterns in our homes, clothes and even in our food.





Think and answer -

1. What pattern did Radha saw on the trunk of the tree ?
2. What is the pattern of colour on the tree?
3. What pattern is there in the birds flying in the sky?
4. How many birds are flying in the sky?

Let's understand the pattern-

Pattern-1

Understand the pattern of the following shapes and proceed further-

(i)					
(ii)					
(iii)					
(iv)					

Pattern-2

Understand the pattern of the following shapes and proceed further-

(i)				
(ii)				





(iii)

--	--	--	--

(iv)

--	--	--	--

Pattern-3

Understand the pattern of the following shapes and proceed further-

(i)

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

(ii)

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

(iii)

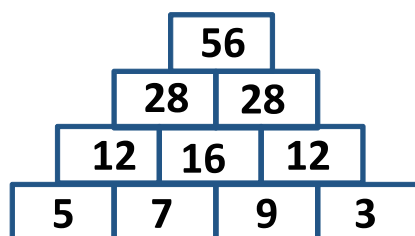
--	--	--	--	--	--	--

(iv)

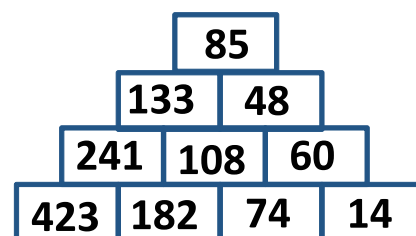
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Pattern-4

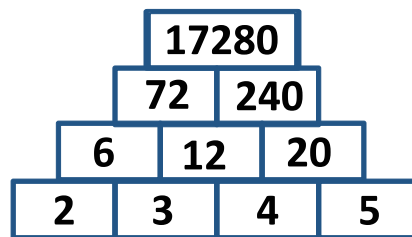
Understand the pattern of the following numbers and see how they proceed further-



Pattern based on Addition



Pattern based on Subtraction



Pattern based on Multiplication

Complete the following number pattern-

1	3	5	7	9	11				
---	---	---	---	---	----	--	--	--	--

1	5	9	13	17	21				
---	---	---	----	----	----	--	--	--	--

55, 49, 43, 37,,,,

5	11	17	23						
---	----	----	----	--	--	--	--	--	--

727, 720, 713, 706,,,,

525	545	565	585						
-----	-----	-----	-----	--	--	--	--	--	--

10520	20521	30522	40523						
-------	-------	-------	-------	--	--	--	--	--	--

In the above pattern, we practiced the pattern of addition and subtraction of digits. Similarly, understand the pattern of Multiplication and practice by taking it further-

Example-

$$1 \times 9 = 9$$

$$11 \times 9 = 99$$

$$111 \times 9 = 999$$

$$1111 \times 9 = 9999$$

$$11111 \times 9 = \dots\dots\dots$$

$$111111 \times 9 = \dots\dots\dots$$

$$1 \times 1 = 1$$

$$11 \times 11 = 121$$

$$111 \times 111 = 12321$$

$$1111 \times 1111 = 1234321$$

$$11111 \times 11111 = \dots\dots\dots$$

$$111111 \times 111111 = \dots\dots\dots$$



Similarly, we should understand the pattern of the Division and practice making new patterns of this type-

Example- $100000 \div 2 = 50,000$

$$10000 \div 2 = 5000$$

$$1000 \div 2 = 500$$

$$100 \div 2 = \dots\dots\dots$$

$$10 \div 2 = \dots\dots\dots$$

$$100000 \div 10 = 10,000$$

$$10000 \div 10 = 1000$$

$$1000 \div 10 = 100$$

$$100 \div 10 = \dots\dots\dots$$

$$10 \div 10 = \dots\dots\dots$$

Management of data-

On Independence Day, fruits were distributed to the students in a school, in which, baskets filled with various fruits were placed in front of a group of 28 children. Now each child was asked to pick a fruit of his/her choice.

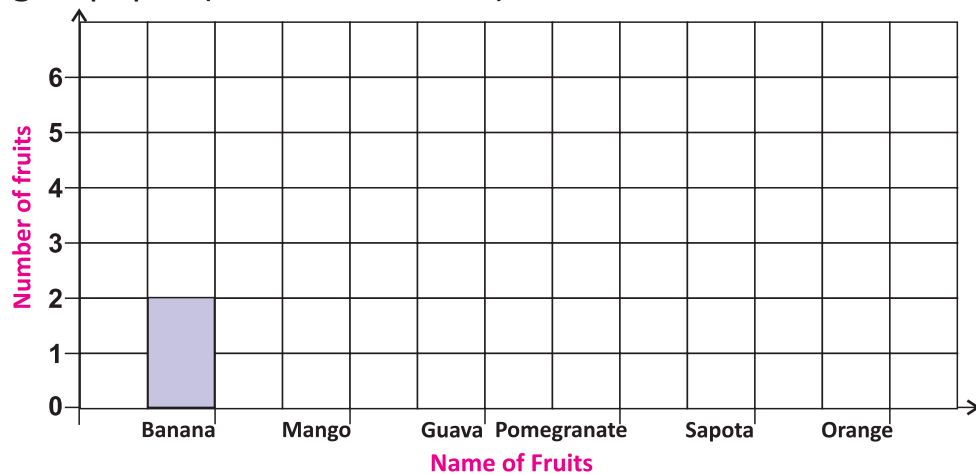
One by one, each child kept picking up a fruit and also marking it in the table made on the board. The incomplete table was made as below. Complete the table-

Names of fruits	Tally Mark	Number of children
Banana		
Mango		
Guava	 	5
Pomegranate		
Sapota	 	
Orange		6





The information represented in the above table should be made by the students on grid paper (checkered sheet).



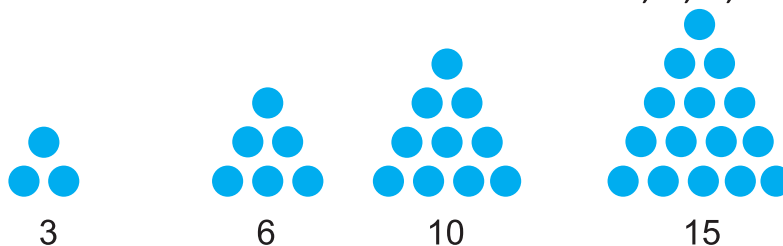
Look at the diagram drawn above and answer-

1. The number of children who like Sapota are
2. Name the fruits which are liked by equal number of children.....
3. Name the fruits which is liked the most

Also know this-

Triangular Numbers

It is a number sequence represented by a series of equilateral triangles made up of dots. These numbers are in the form of 1, 3, 6, 10, 15, 21.....etc.



Square Numbers

When a number is multiplied by itself, then the number obtained is called a Square Number. Example-

$$1 \times 1 = 2$$

$$2 \times 2 = 4$$

$$3 \times 3 = 9$$

$$4 \times 4 = 16$$



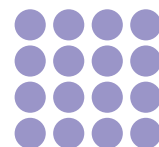
1x1



2x2



3x3



4x4

Practice Work

1. Choose the correct option to complete the following patterns-

(i) 50, 54, 58,

(a) 59 (b) 60 (c) 61 (d) 62 ()

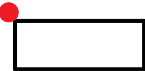
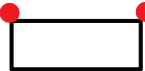
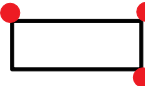
(ii) 10, 50, 250, 1250,

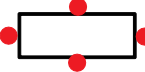
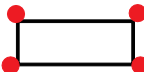
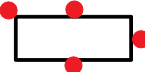
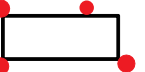
(a) 6050 (b) 6150 (c) 6350 (d) 6250 ()

(iii) 5000, 4500, 4000, 3500,

(a) 3000 (b) 4000 (c) 5000 (d) 6000 ()

2. Complete the pattern of the following shapes-

(i)    ?

(a)  (b)  (c)  (d)  ()

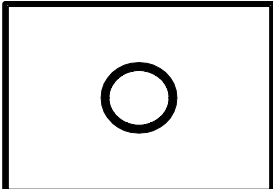
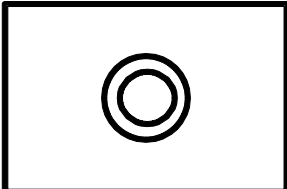
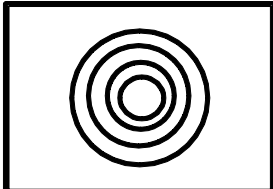
(ii)    ?

(a)  (b) 
 (c)  (d)  ()

(iii)     ?

(a) 36 (b) 54 (c) 81 (d) 84 ()

3.

(i)    



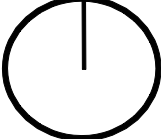
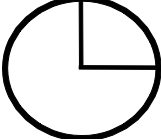
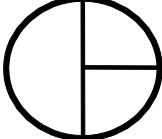
(ii)    

(iii)    

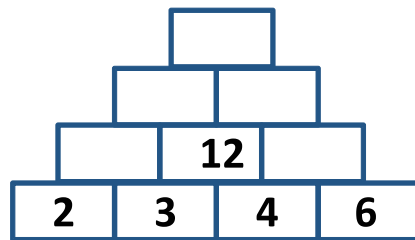
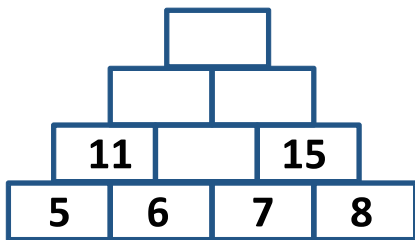
(iv)    

(v)    

(vi)    

(vii)    

4. Understand the pattern and fill in the blanks-





5. Complete the following number pattern-

(1) 5, 13, 21, 29, 37,,,

(2) 1, 2, 4, 8, 16,,,

(3) 3, 9, 27, 81,,,

(4) 200, 180, 160, 140,,,

(5) 10050, 9950, 9850,,,

(6) 11000, 22000, 33000,,,

(7) 5, 11, 18, 26, 35, 45,,,

(8) 505, 615, 735, 865,,,

6. Identify the pattern of numbers and answer the rule and proceed further-

(i) 15, 22, 29, 36,,,

Rule- Adding 7 to the first number gives the next number.

(ii) 2, 4, 8,,,

Rule-

(iii) 3, 6, 9,,,

Rule -

(iv) 29, 25, 21,,,

Rule -

(v) 128, 64, 32,,,

Rule -

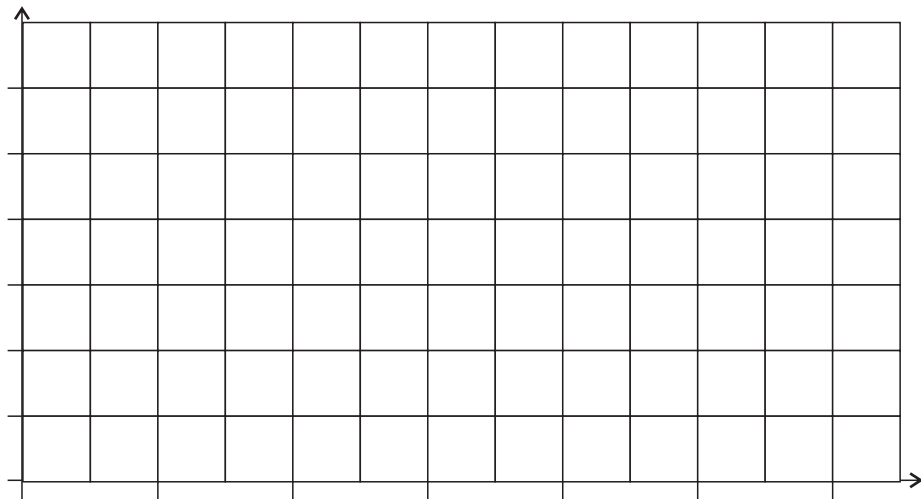




7. The colours liked by the students in a class are as given in the table.
Complete the following table-

Colour	Tally Mark	Frequency
Red	_____	5
Yellow		___
Green		___
Blue	_____	6
Black		___
White	_____	2

Represent the data given in the above table through a diagram on a checkered sheet.



We Learnt and Understood - II



1. Multiply-

(i) 2453×624

(ii) 3891×237

(iii) 1765×418

(iv) 3127×295

(v) 1301×751

(vi) 6213×981

2. Solve and check your answer-

(i) $1440 \div 18$

(ii) $2352 \div 24$

(iii) $1680 \div 20$

(iv) $972 \div 12$

(v) $315 \div 9$

(vi) $1872 \div 26$

(vii) $1600 \div 25$

(viii) $1045 \div 19$

(ix) $2465 \div 17$

3. Answer –

(i) Radhika bought 15 copies for Rs 1230. What is the cost of one copy?

(ii) A farmer has 984 oranges. How many dozen oranges will he have?

(iii) A student studied for a total of 1460 minutes in 20 days. How many minutes did he study every day?

(iv) Saurabh walked for a total of 9360 steps in 12 days. How many steps did he walk on an average every day?

(v) 875 toffees are to be packed in small packets. If one packet contains 25 toffees, how many packets will be made?

(vi) Ekanyunena Purvena of the digit 4 in 184-

(vii) Ekanyunena Purvena of digit 3 in 539-

(viii) Ekanyunena Purvena of number 6 in 762-

(ix) Ekanyunena Purvena of number 9 in 891-

4. Show the following fractions on the number line-

(i) $2\frac{1}{4}$

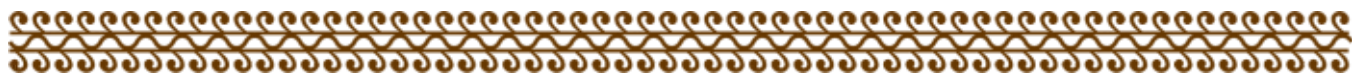
(ii) $1\frac{1}{2}$

(iii) $2\frac{3}{4}$

(iv) $\frac{7}{2}$

(v) $\frac{2}{3}$

(vi) $\frac{8}{4}$



5. Seema had 20 mangoes. She gave $\frac{1}{5}$ mangoes to her friends. How many mangoes did Seema give to her friends?
6. Ramesh bought 2 dozen apples. $\frac{1}{3}$ of these apples got rotten. How many apples got rotten?
7. Arya had 36 biscuits. She gave $\frac{1}{6}$ biscuits to her brother. How many biscuits did Arya gave to her brother?
8. There are 24 oranges in a bag. Rekha ate half of them. How many oranges are left now?
9. Put the correct symbol of $<$, $>$, $=$ between the fractions given below-

 $\frac{1}{2}$	 $\frac{1}{3}$	$\frac{1}{2} > \frac{1}{3}$
 $\frac{2}{4}$	 $\frac{3}{4}$	$\frac{2}{4} \square \frac{3}{4}$
 $\frac{2}{4}$	 $\frac{2}{3}$	$\frac{2}{4} \square \frac{2}{3}$
 $\frac{2}{4}$	 $\frac{4}{8}$	$\frac{2}{4} \square \frac{4}{8}$
 $\frac{1}{2}$	 $\frac{2}{4}$	$\frac{1}{2} \square \frac{2}{4}$
 $\frac{3}{4}$	 $\frac{4}{5}$	$\frac{3}{4} \square \frac{4}{5}$

10. Convert decimal to fraction-

(i) $0.5 = \dots\dots\dots$

(ii) $0.75 = \dots\dots\dots$

(iii) $1.2 = \dots\dots\dots$

(iv) $0.10 = \dots\dots\dots$

11. Write in decimal-

(i) 4 kilo 250 gram = $\dots\dots\dots$ kilo

(ii) 1 meter 75 centimeter = $\dots\dots\dots$ meter



12. Put the correct sign of $>$, $<$ or $=$ in the following blanks-

- (i) 4.25 4.5 (ii) 6.75 6.7 (iii) 3.3..... 3.35
(iv) 7.85 7.58 (v) 9.09 9.90 (vi) 0.50.....05
(vii) 2.45 2.54 (viii) 8.8 8.80 (ix) 57.5..... 5.75

13. Complete the pattern-

- (i) 3, 6, 12, 24,
(a) 36 (b) 40 (c) 48 (d) 50 ()
- (ii) 1024, 512, 256, 128,
(a) 64 (b) 96 (c) 100 (d) 32 ()
- (iii) 5, 15, 45, 135,
(a) 270 (b) 405 (c) 325 (d) 37 ()
- (iv) 1000, 900, 800, 700,
(a) 500 (b) 550 (c) 600 (d) 650 ()

14. The marks obtained by the students of Class 5 in the first test are 8, 8, 7, 5, 8, 7, 4, 5, 6, 9, 4, 5, 7, 8, 8, 7, 6, 5, 4, 8. Complete the following table by matching the marks.

Marks Obtained	Tally Marks	Frequency
4		
5		
6		
7		
8		
9		

Also draw a Bar graph or grid on the checkered sheet.



Lesson - 11

Let's Learn to Measure and Weight



Mohan went to a grocery store to buy goods. There he saw that the shopkeeper was weighing pulses, sugar, rice and flour on a scale. After this, Mohan went to a dairy to buy milk. There the shopkeeper measured the milk in a vessel and gave it to him.

Mohan : Kaka, why didn't you weigh the milk on a scale? Why did you measure it with this vessel?

Shopkeeper : Hey Mohan! This is a litre measurement. I have measured it and given you 1 litre of milk.

Meanwhile another customer came to buy milk. Kaka gave him milk once from a 1 litre vessel and the second time from a $\frac{1}{2}$ litre vessel.

Mohan : Uncle, this other vessel is even smaller than that vessel.

Shopkeeper : Yes Mohan, this is half litre.

Mohan : Half litre, meaning..... millilitre. That means he has taken 1 litre and 500 millilitre milk.



In the previous class, we studied about capacity and also learnt that there are 1000 millilitres in 1 litre.

Shopkeeper : Mohan, you understood it right.

Look, what measuring utensils are available at the dairy.

You might have also seen such litres in the shops.



Think and answer-

Items that are weighed with weights	Items that are measured in litres
Rice,	Oil,

To give 2 litres of milk, the shopkeeper measured and gave 1 litre of milk twice.

Today he forgot to keep the 1 litre measure. The customer is asking for 1 litre milk and the shopkeeper has a $\frac{1}{2}$ (half) litre vessel.



Mohan told another method.

Mohan : This can be measured twice using a half litre vessel.

How many times will you give milk to customers using this measuring vessel?



I want 1 litre
milk



I want 2 litre
milk



I want $1\frac{1}{2}$ litre
milk

Complete the table-

S.No.	Given Measurement	Quantity of Milk
1.		 Litre
2.		
3.		

Mohan also has a drinking water bottle. It has 1 litre written on it.

He had to

find out how much water a bucket at his house could hold. Mohan did not have a dairy litre so he filled the bucket with water from his bottle and measured the capacity of water the bucket could hold.



Do you know Mohan's bucket holds 20 litres of water. Mohan filled the bottle with water times and put it in the bucket.

At Mohan's house, water is collected in a tank. It holds 500 litres of water.

If this tank is filled with a 20 litre bucket, then how many buckets of water will come into the tank?





The next day, before going to the farm, Mohan's father got 25 litres of diesel filled in the tractor. He said that he would get the diesel measured. The petrol pump man filled a 5 litre measuring vessel with diesel and poured it into the tractor.

Can you tell how many times the petrol pump man would have filled the diesel with this measuring vessel, so that 25 litres of diesel could fit into the tractor?

1. How many litres of oil can be obtained using the measurements given below?
2. With which measure will the shopkeeper measure the measurements given below?

- (i) 2 litre 200 ml
- (ii) 5 litre 500 ml
- (iii) 3 litre 200 ml



3. Estimate how many litres of water can be filled in the water tank in your school?
4. Does the water tank at your home fills with more than 100 litres of water or less?
5. Mohan brought cough syrup. It had a lid on it, on which there were four marks- 2.5 ml, 5 ml, 7.5 ml and 10 ml. The doctor told him to drink this medicine up to the top mark three times a day.
 - (i) How much medicine did Mohan drink in one day?
 $10 \times 3 = \dots\dots\dots$ millilitres
 - (ii) Will a 200 ml medicine bottle last for 6 days?

6. Look at the items given below and answer whether you will measure these in litres or millilitres?

Items	Litres/ Millilitres
Eye drops	
A cup of tea	
A glass of drinking water	
Hair oil	
Petrol in car	

Think : Rohan's uncle has a 2000 litre water tank at his house. 100 litres 400 ml of water was used in his house on Saturday and 250 litres 950 ml of water on Sunday. How much total quantity of water was used in two days?

Day	Actual water used	Estimated Water (in litres)
Saturday	100 litres 400 ml	About 100 litres and a half litre
Sunday	250 litres 950 ml	About 250 litres and 1 litre
Total	If you add litres first then, $100 + 250 = 350$ litres. Then add the millilitres $400 + 950 = 1350$ ml	About 350 litres and a half litre

1000 millilitre in 1350 millilitre is equal to 1 litre, so we can say 1 litre and 350 millilitre.

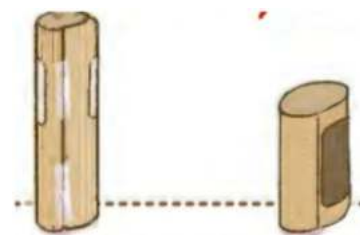
That means, 350 litres and 1350 millilitre equals 351 litres and 350 millilitre.

Think and answer -

- Find out-
 - 8 litre 200 ml + 2 litre 500 ml =
 - 12 litre 300 ml + 6 litre 700 ml =
 - 4 litre 570 ml + 9 litre 700 ml =
- A shopkeeper sold 13 litres 250 ml of oil on Monday, 20 litres 150 ml on Tuesday and 18 litres 740 ml on Wednesday. How much oil did he sell in total?
- One can hold 3 litres of kerosene. What will be the total quantity of kerosene in 8 such Cans?
- How many 250 ml milk packets can be made from 10 litres of milk?

Try it –

Take the cover of an old notebook. Fold its front part lengthwise and the back part widthwise. Make two bottles by having a cardboard at the bottom with the help of tape.



Make an estimate and answer which one of these can fill with more sand?

How much weight can you weigh individually with the help of these weights?



  	1 kg 250 grams
  	
   	
    	

Which weights can be used to find the weight given below?

(1) 2 kg 500 gram = 1 kg + 1 kg + 200 gram + 200 gram + 100 gram

(2) 1 kg 250 gram = + +

(3) 5 kg 500 gram = + + + + +

(4) 35 kg 700 gram = + + + + +

Can you guess?

1. Does your Math book weigh less or more than 1 kg?
2. Can an elephant weigh 100 kg?
3. Will the weight of a wooden chair be more or less than 20 kg?
4. Is the weight of your bag more or less than 5 kg?

Mohan had taken a list with his sister Reena to the grocery store to buy things. See what he has to buy?

Flour- 40 kg	Cumin seeds- 250 grams
Rice- 10 kg	Mustard- 350 grams
Dal - 2 kg 500 grams	Sugar- 5 kg
Daliya - 2 kg 250 grams	Tea- 250 grams
Rajma - 1 kg 750 grams	Chickpeas- 1 kg 250 grams

Mohan : I have two bags. You can put rajma, dal and daliya in one bag.

Reena : Will it be too heavy? Will I be able to lift this bag?

Let's find out how much the bag weighs?

Rajma	1 kg	750 grams
Dal	2 kg	500 grams
Daliya	2 kg	250 grams
Total weight	$1 + 2 + 2 = 5$ kg	$750+500+250= 1500$ grams

So, the total weight of the bag is 5 kg and 1500 grams.

Remember, 1 kilogram = 1000 grams.

That is, 1500 grams is equal to 1 kilogram and 500 grams.

So, the total weight is 6 kg 500 grams.

You also find out the weight of the bag-

1. If sugar, pulses and tea leaves were kept in the bag, what would have been the weight of the bag?
2. If the bag contained chickpeas, kidney beans and mustard, what would the bag have weighed?

You also put different things in a similar bag and ask your friend about the weight of the bag.

Mohan put a large bag of rice on his bicycle and left for home. The bag got torn out a little but Mohan did not know it. On reaching home, he told his father that some rice got spilled out of the bag because the bag of the rice got torn.

His father placed the bag of rice on a digital scale at home and the weight obtained was 9 kg 390 grams.



Where have you seen a scale like this? Is there a need to keep weights on it?

Mohan calculated how much rice spilled out?

Previous weight of Rice	10 kilograms	
Remaining weight of Rice	9 kilograms	390 gram

Mohan knows that 1 kilogram = 1000 grams, so he wrote 10 kilogram as 9 kilogram and 1000 grams.

Previous weight of Rice	9 kilograms	1000 grams
Remaining weight of Rice	9 kilograms	390 grams
Weight of rice spilled out	0 kilograms	610 grams

Practice Work

- Fill in the blanks-
 - 700 ml + ml = 1 litre
 - 1500 gram + 500 gram = kilogram
 - 3 kilograms + = 5000 grams
 - 2800 ml -ml = 1 litre
- Deepa bought 500 grams of sugar and 250 grams of tea. How much total grams of items did she buy ?
- Kishan's field produced 550 kg of sugarcane. His brother Sanjay's field produced 750 kg of sugarcane. Sanjay's field produced how much more sugarcane than Kishan's field?
- Sanjeev bought 1 kg sugar, 250 grams tea, 500 grams gram flour and 750 grams refined flour from the market. What was the total weight of items purchased by Sanjeev?
- Reena buys 1 kg tomatoes, 750 grams chillies and 2 kg 600 grams potatoes from the market and puts them in her bag. What is the total weight of her bag?
- A bag contains rice which weighs 5 kg. The other bag contains sugar



which weighs 2 kg 500 grams. How much more does the bag full of rice weigh than the bag full of sugar?

7. One Can contains 4 litres 200 millilitres of oil. The other Can contains 1 litre 750 millilitres of oil. If the oil from both the Cans is mixed, then how much oil will be there in total?
8. A shopkeeper sold 14 litres 300 ml of groundnut oil and 9 litres 750 ml of mustard oil in a day. How much oil did the shopkeeper sell in a day?
9. Mohit has a cow and a buffalo. The cow weighs 320 kg 400 grams and the buffalo weighs 425 kg 700 grams.
 - (i) If both, the cow and the buffalo are made to stand on a weighing machine, then what will be the total weight shown on the machine?
 - (ii) How much heavier is the buffalo than the cow?
 - (iii) If a cow eats 15 kg 250 grams of grass in 7 days, then how much grass will it eat in 42 days?
10. While going from Udaipur to Sirohi, Rakesh filled his car with 28 litres 450 ml petrol. On reaching Sirohi, his car was left with 12 litres 230 ml petrol. How much petrol was spent while going from Udaipur to Sirohi?



Lesson - 12

Watch from Delhi



Father has brought watches with needles for Ramesh and his sister from Delhi.

Pooja : Look Ramesh, father has brought such beautiful watches for us.

Ramesh : But how do we see the time in this, Didi?



Pooja : Look, our watches have three hands which show hours, minutes and seconds.

The second hand takes 60 seconds to complete one revolution on the clock. When the second hand completes one revolution, the minute hand moves forward by 1 minute.

When the second hand rotates 60 times on the clock then the minute hand completes one rotation which is equal to 1 hour.

That means,

1 minute = 60 seconds

1 hour = 60 minutes

or 60 times 60 seconds = 60×60 seconds = 3600 seconds = 1 hour

Pooja : Ramesh, how many minutes will there be in 5 hours?

Ramesh : 5 hours = 1 hour + 1 hour + 1 hour + 1 hour + 1 hour

That is, 60 minutes + 60 minutes + 60 minutes + 60 minutes + 60 minutes = 300 minutes.

Can you answer -

2 hours = minutes

1 hour = second

Two and a half hours ($2\frac{1}{2}$) =
seconds

One and a half hours ($1\frac{1}{2}$) =
minutes

360 minutes = hours

The next day on Raksha Bandhan, Ramesh went to his Nani's house with his mother and father. On reaching there, he saw that many people were working in his Nana's field. Seeing them, Ramesh asked his Nana.

Ramesh : Nana ji, what are these many people doing on your farm today?

Nana : Son, we have grown tomatoes. Now it is time to pick them. Every day about 1000 kg of tomatoes are ready to be picked in this field, which have to be picked early in the morning and taken to the market, so we have given the work of picking tomatoes to these people.

Ramesh : But why so many people? These can be picked by you and Nani together.

Nana : Look son, I alone can pick only about 50 kilo tomatoes in an hour, so think and tell me how much time will it take me to pick all the tomatoes?

Ramesh : Time taken to pick 50 kg of tomatoes = 1 hour.





Therefore, time taken to pick 100 kg of tomatoes = 1 hour + 1 hour = 2 hours

So, the time taken to pick 10 times of 100 kg of tomatoes = 10 times of 2 hours i.e. 20 hours.

Hey Nanaji, there are full 24 hours in a day.

It will take you 20 hours i.e. almost 1 day to pick tomatoes alone.

Nani : Ok Ramesh, now tell me, if I also join your Nanaji and pick 50 kg of tomatoes every one hour, then in how many hours will we be able to pick 1000 kg of tomatoes?

Ramesh : In 1 hour, 50 kg for you and 50 kg for Nana, means 50 kg + 50 kg equals 100 kg.

The time taken by both of you to pick 100 kg of tomatoes is 1 hour.

So, the time taken to pick 1000 kg of tomatoes is 10 hours.

Ramesh : Now I was able to understand Nanaji, that by increasing the number of people to pick the tomatoes, we can pick them in less time.

Think and answer -

If a person picks 50 kg of tomatoes in 1 hour, then -

1. How many people will be required to pick 500 kg of tomatoes in 1 hour?
2. How many tomatoes will he be able to pick in 2 hours 30 minutes?
3. If two people together can pick only 80 kg of tomatoes in 1 hour, then how much time will it take to pick 520 kg of tomatoes?



Make a list of tasks that can be done in less than 1 hour and more than 1 hour-

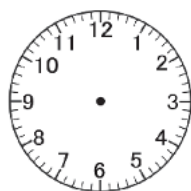
Tasks that can be done in less than 1 hour	Tasks that can be done in more than 1 hour

After Raksha Bandhan holidays, Teachers' Day was celebrated in Ramesh's school in which all the children were given the roles of different teachers. Ramesh was given the responsibility of ringing the bell according to the periods as per the school timetable. Ramesh is taking care of every period and rings the bell to change the period after checking the time on the clock in the classroom.

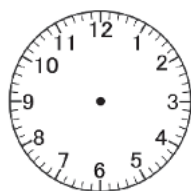
Time-Table

Sr. No.	Period	Time	Time duration
1	Notification bell	9:55 AM	-
2	Morning Assembly	10:00 - 10:25	25 minutes
3	I	10:25 - 11:05	40 minutes
4	II	11:05 - 11:45	40 minutes
5	III	11:45 - 12:25	40 minutes
6	IV	12:25 - 1:05	40 minutes
7	Break	1:05 - 1:30	25 minutes
8	V	1:30 - 2:10	40 minutes
9	VI	2:10 - 2:50	40 minutes
10	VII	2:50 - 3:25	35 minutes
11	VIII	3:25 - 4:00	35 minutes

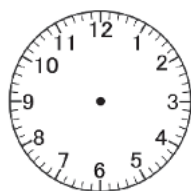
Which period did Ramesh change at what time? Display them by making needles on the clock below-



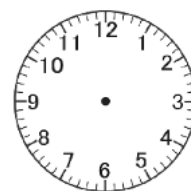
Period-1



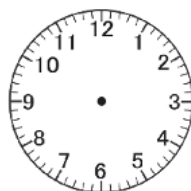
Period-2



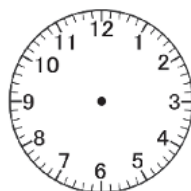
Period-3



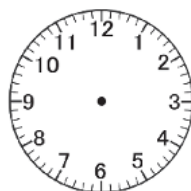
Period-4



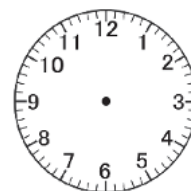
Period-5



Period-6



Period-7



Period-8



Ramesh's father had to go back to Delhi the next day. Ramesh, his elder sister Pooja and his mother went to see him off at the railway station. When they left for the railway station, it was 11 o'clock. They reached the station at 12:15. On reaching the station, he asked his father-

Ramesh : At what time will your train arrive, father?

Father : My train will arrive at 1:35?

Ramesh : Father, how much time is left for your train to arrive?

Father : Look, it's 12:15 now. There are still 45 minutes left until 1:00 and my train will arrive at 1:35.

That is, 45 minutes + 35 minutes = 80 minutes

= 60 minutes + 20 minutes

= 1 hour 20 minutes (60 minutes = 1 hour)

Ramesh : It took us 1 hour 15 minutes to reach the station from home.

Didi, if we add 1 hour 20 minutes and 1 hour 15 minutes, then what will be the total?

Pooja : See, adding 15 minutes and 20 minutes gives 35 minutes and if we add 1 hour to 1 hour, it gives 2 hours.

$$\begin{array}{r} \quad 1 \text{ hour} \quad 15 \text{ minutes} \\ + \quad 1 \text{ hour} \quad 20 \text{ minutes} \\ \hline \text{Means, } 2 \text{ hours} \quad 35 \text{ minutes} \end{array}$$

Now you add 1 hour 40 minutes and 3 hours 25 minutes.

Ramesh : Adding 40 minutes and 25 minutes makes 65 minutes

$$\begin{array}{r} \quad 1 \text{ hour} \quad 40 \text{ minutes} \\ + \quad 3 \text{ hour} \quad 25 \text{ minutes} \\ \hline \text{Means, } \phantom{1 \text{ hour}} 65 \text{ minutes} \end{array}$$





Pooja : Look Ramesh, 65 minutes is 1 hour and 5 minutes. So, you should write 5 minutes under the minutes and add 1 hour in the hour box-

	1 hour	
	1 hour	40 minutes
+	3 hour	25 minutes
Means,	5 hours	5 minutes

Ramesh : But didi, how much less is 1 hour 40 minutes than 3 hours 25 minutes?

Pooja : Let's find out-

3 hour	25 minute
- 1 hour	40 minute

2 hour	85 minute
3 hour	25 minute
- 1 hour	40 minute
1 hour	45 minute

Here we have to subtract 40 minutes from 25 minutes, but we cannot subtract 40 minutes from 25 minutes. So, we will convert 1 hour from 3 hours into minutes.

i.e. 1 hours 25 minutes = 60 minutes + 25 minutes

= 85 minutes

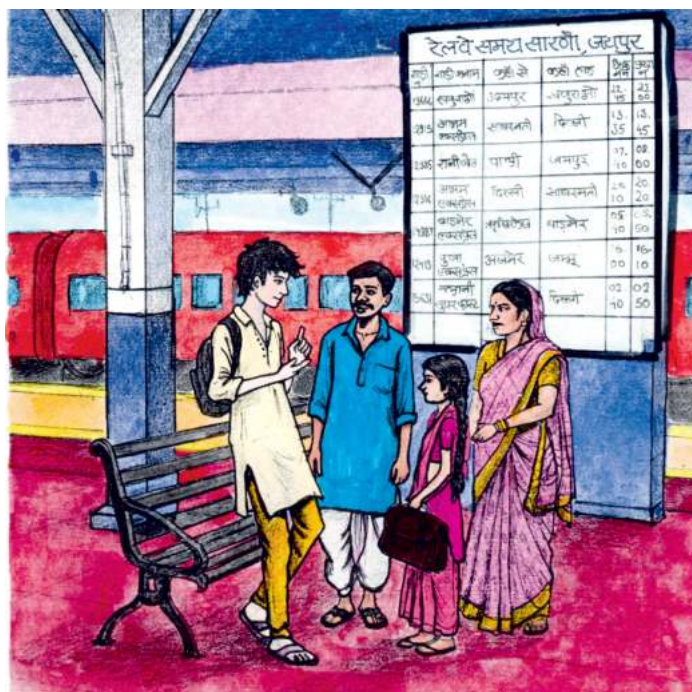
Now, 85 minutes - 40 minutes = 45 minutes

And 2 hours - 1 hour = 1 hour

You also try -

1. What will be the total time of 1 hour 40 minutes and 3 hours 25 minutes?
2. What is the total time of 2 hours 30 minutes and 4 hours 15 minutes?
3. What will be the total hours and minutes if we add 2 hours 55 minutes and 1 hour 35 minutes?





Railway Time Table, Jaipur

Train No.	Train Name	From where	To where	Jaipur Arrival	Jaipur Departure
19666	Khajuraho Express	Udaipur	Khajuraho	22:45	23:00
12915	Ashram Express	Sabarmati	Delhi	13:35	13:45
12982	Ranikhet	Pali	Jaipur	07:40	08:00
12916	Ashram Express	Delhi	Sabarmati	20:10	20:20
14887	Barmer Express	Rishikesh	Barmer	05:40	05:50
12413	Pooja Express	Ajmer	Jammu	16:00	16:10
15631	Malani Superfast	Barmer	Delhi	02:40	02:50

Then Ramesh's eyes fell on the chart related to the arrival and departure of trains.

Ramesh : But father, the time written in this chart is 13:35.

Father : Ramesh, the arrival and departure time of trains, buses and airplanes is written in the form of 24 hours.

When our clock shows 12 noon, we read the time after that as 1 o'clock, 2 o'clock, 3 o'clock, but at railway stations, bus stands and airports, after 12 noon, the time is read in the same order as 13 o'clock, 14 o'clock, After 12 o'clock in the night, the time is read as 1, 2, 3,12.

Ramesh : Your ticket is for the daytime, then 1 o'clock means 13 o'clock. If we add 35 minutes more to it, it come as 13:35.

Yes father, here is your train.

- Can you find out the name and number of Ramesh's father's train?
Write-

Name of train : Train Number :

2. At what time will the Pooja Express train depart from Jaipur?
3. For how long will train number 19666 stop at Jaipur station?
4. If the Ashram Express is running at the speed of 70 km/hr, then how much time will it take to cover a distance of 245 kms?
5. If a school bus covers a distance of 40 kilometers in 1 hour then -
 - (i) How much distance will it cover in 5 hours 15 minutes?
 - (ii) How much time will the school bus take to cover a distance of 110 km?

Let's try it-

1. Annu's bus is arriving at 10:40. It is 9:50 by Reena's watch. How much more time will the bus take to arrive?
2. Anurag left Alwar for Jammu at 6:15 as per the railway time. He reached Jammu after 10 hours. At what time Anurag reached Jammu?
3. Vikas takes 1 hour 50 minutes to reach office but today due to rain, he took 3 hours 15 minutes. How much more time did Vikas take today as compared to the other days?
4. Savita got the mustard threshed at the rate of Rs. 600 per hour. If it took 4 hours and 30 minutes to thresh mustard from 10 bigha of land, then find the total cost of getting the mustard threshed.

While returning from the railway station, they stopped at a vegetable market to buy vegetables. They bought two kilos of potatoes, one kilo of tomatoes, half a kilo of ladyfinger, one kilo of onions, half a kilo of chillies, three kilos of carrots and a quarter kilo of cabbage from a vegetable vendor. The cost of the vegetables purchased was as follows-



Look at the price list and answer -

1. How much will have to be paid to the vegetable vendor for three kilos of carrots?
2. For much total money did they buy the vegetables?
3. To pay for the vegetables, what value of note would require, for which minimum number of notes are to be given.
4. If they give a 500 rupee note to the vegetable vendor, then how much money will the vegetable vendor return them?
5. With the help of which notes can the vegetable vendor return the remaining money out of Rs. 500? In the following table, give the numerical details of notes and coins for the other two methods-

Vegetable Name	Price per Kilo
Potato	30/-
Tomato	50/-
Onion	40/-
Ladyfinger	90/-
Chilly	60/-
Cabbage	80/-
Carrot	35/-

First Method	Second Method	Third Method
1 note of Rs 100 1 note of 20 rupees 2 notes of 10 rupees 2 coins of 5 rupees		

Rupees are used in trade, transactions and other economic activities. Rupee (₹) and paisa are the official currency in India.

The Indian currency Rupee is available in the form of currency notes, coins and digital medium.

1. Notes : Rupee notes come in different denominations, like ₹1, ₹2, ₹5, ₹10, ₹20, ₹50, ₹100, ₹200 and ₹500

2. Coins : Indian currency or rupee coins are also in circulation in various denominations, such as ₹1, ₹2, ₹5, ₹10 and ₹20

3. Digital : Digital currency is an electronic currency that is used in online transactions. Example- UPI payment, payment by QR Code etc.



The next day, Ramesh's grandfather placed an order to buy goods online for Ramesh and Pooja. The bill was as follows-

Bill No. 124

Raj Stationers

Date 29-7-25

Sanjay Nagar, Jaipur

Name and Address- Mahesh chand

S. No	Description	Rate	Quantity	Cost
1.	Exercise book	03 Rs. 75 paise	18	67 Rs. 50 paise
2.	Geometry box	32Rs.	01	32 Rs.
3.	Pencil	01 Rs. 25 paise	10	12 Rs. 50 paise
4.	Pen	18 Rs.	5	90 Rs.
5.	Glue	90 Rs. 25 paise	1 Litre	90 Rs. 25 paise
6.	Register	30 Rs.	12	360 Rs.
7.	Diary	60 Rs.	5	300 Rs.
	In words- Nine hundred and fifty-two rupees Twenty-five paise		Total	952 Rs. 25 paise
1. E & OE				
2. Goods once sold will not be returned.				Signature

Looking at the bill, Pooja asked her grandfather, Grandfather, in this bill, along with rupees paise is also written. What is this paise?

Dadaji (laughing) : Pooja, 1 rupee is equal to 100 paise. In our time, coins smaller than the 1 rupee coin were in circulation in the market. These coins were of 1 paisa, 2 paisa, 5 paisa, 10 paisa, 20 paisa, 25 paisa, 50 paisa.





Let's see the bill and tell me what is the total cost of 1 Exercise book and 1 Pencil ?

Pooja : The price of the Exercise book is 3 Rs. 75 paise and the price of the pencil is 1 Rs. 25 paise.

i.e.	Rupee	Paise	First, we will add 75 paise and 25 paise, it becomes 100 paise which becomes 1 rupee.
	3	75	
	+ 1	25	Now we are left with 0 paise which we will write below the paise and the rupee made up of the paise, we will write above the rupees.
	1		
	Rupee	Paise	3 rupees + 1 rupee + 1 rupee equals 5 rupees. Write this under the rupees.
	3	75	
	+ 1	25	Grandfather, the total cost of 1 Exercise book and 1 Pencil is 5 rupee and 00 paise.
	5	00	

Pooja : Grandpa, if we had to order only 3 Exercise books, how much would they cost?

Grandfather : The cost of one exercise book = 3 rupee 75 paise

The cost of three exercise books = 3 times of 3 rupee 75 paise

i.e. Rs. 3.75×3

= 9 rupee 225 paise

= 9 rupee + 200 paise + 25 paise

= 9 rupee + 2 rupee 25 paise

= 11 Rs. 25 paise

Can you tell how much more the price of a pen is than the price of a pencil?

Pooja : For this, the price of the pencil will have to be subtracted from the price of the pen, grandfather.



Rupee	Paise
18	00
- 1	25

First of all, we will write the price of both in this manner.

Now since, in the price of pen, paise is 00, but we have to subtract 25 paise, therefore, out of 18 rupees, we will convert 1 rupee into 100 paise.

17	100
Rupee	Paise
18	00
- 1	25
	75

Now if we subtract 25 paise from 100 paise, 75 paise are left.

We will write this under the paise.

17	100
Rupee	Paise
18	00
- 1	25
16	75

Now if we subtract 1 rupee from the remaining 17 rupees, it becomes 16 rupees.

Therefore Grandpa, the price of pen is 16 rupees 75 paise more than the pencil.

Practice Work

1. Suman bought 1 kg of Sugar at the rate of 40 rupee 25 paise per kg and 1 kg Rice at the rate of 72 rupee 50 paise per kg. How much total money did she pay ?
2. The ticket to visit the zoo is 10 rupee 50 paise per person. How much money is required to buy tickets for 7 persons?

- 
3. The price of a packet of milk is 32 rupees 25 paise while the price of a packet of buttermilk is 12 rupees 75 paise. The price of a packet of milk is how much more than the packet of buttermilk?
 4. If the price of one pen is 45 rupees 75 paise, then what is the cost of 4 such pens ?
 5. 5 people sitting in a bus. what is paid a total fare of 77 rupees 50 paise to the bus conductor, what is the bus fare per person?
 6. A train leaves Jaipur at 20:35 on Monday and reaches Udaipur at 06:45 on Tuesday. How much time did the train take to travel from Jaipur to Udaipur?
 7. Solve-
 - (i) Subtract 1 hour 55 minutes from 2 hours 40 minutes.
 - (ii) Add 8 hrs 35 mins to 13 hrs 25 mins.



Lesson - 13

Length and Distance



Deepa was telling her friend Arpita how far her Nani's house was. To go to her Nani's house, she had to change two buses and it took from morning till evening to reach there.

Arpita : Well! My Nani's house is nearby. I go there with my father on a motorcycle which takes about half an hour.

Teacher : Deepa and Arpita, do you know how far is your Nani's house from your house?

Deepa : Yes, Mamaji was telling me that it is 350 kilo..... I don't know, he was saying something like that.

Teacher : He must have said 350 kilometers.

The teacher asks all the students in the class-

We talk about the length, height and distances of many objects every day.

Different units are used to measure length, height and distance.

Teacher : Think, how would you measure the length of a pencil?

Rohit : From the scale.



Teacher : Yes, with a scale. We can measure the length of a pencil in centimetres. All of you measure the length of your pencils. The length of the pencil above is centimetres.

Measure the following items using your scale -

- Length of Math bookcm
- Height of your water bottle cm
- Width of your copy..... cm
- Length of pen cm



Teacher : If the distance of a long jump needs to be measured, then the measurement using a scale would be appropriate?

Sushil : The scale will be too small.

Teacher : We can measure this distance with a tape measure in Meters (mts).

Do long jumps and record the distance of each jump by measuring it with a tape.

Teacher : If I want to know the height of Tarun then how will I find it?

Neelam : Tarun is the tallest in the class.

Teacher : But what is his height?

Length or height is measured in feet and inches with the help of a tape. Generally, at homes, height is measured in feet and inches.

Measure the height of any five children of your class and write it in the table.



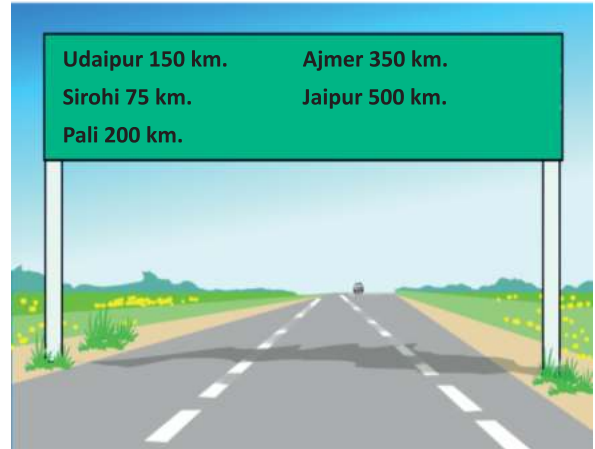
S.No.	Student Name	Height
1.		
2.		
3.		
4.		
5.		



Teacher : How will we measure the distance between two cities?

Arpita : In kilometers.

Teacher : Yes. The distances on National Highways are shown in kilometres because the distances between cities are long and it is difficult to measure them in smaller units.



Kilometer is the appropriate unit for long distance.

Find the distance of the following cities from your village or city and write it down-

Mumbai

Prayagraj

Delhi

Try it with the help of a scale-

1. Measure and answer—
 - Length and width of rubber
 - Length of sharpener
 - Width of school bag
 - Length of duster in class
 - Length and width of any chart or poster in the classroom
2. Measure the height of the family members in feet and inches using a tape and make a list.
3. How many kilometers is the distance from your home to school? Estimate and find the correct distance.

The teacher told that Deepa's Nani's house is about 350 kilometers away from here.

If we express it in meters, then how many meters will it be?





All the children started thinking.

Rohit : Madam, there are 1000 meters in one kilometer but in 350 kilometers

Teacher : To convert a large unit into a smaller unit, we multiply.

To convert 350 kilometers into meters we will multiply it by 1000.

1 kilometer = 1000 meters

350 kilometer = 350×1000 meter = 3,50,000 meters

Convert kilometer to meters-

(1) 200 kilometres

(2) 135 km

(3) 800 km

(4) 270 km

Teacher : Now think, if the distance of a long jump is 3 meters, then how can it be converted in centimeters?

Arpita remembers that there are 100 centimetres in 1 metre.

Here also, the bigger unit is being converted into smaller unit.

3 meters = 3×100 centimeter = 300 centimeters

Also know-

Length Measurement Units-

- | | |
|---------------------------------|--------------------------|
| ● 1 kilometer = 1000 meters | ● 1 meter 100 centimeter |
| ● 1 centimeter = 10 millimeters | ● 1 foot = 12 inches |
| ● 1 yard = 3 feet | ● 1 mile = 1760 yards |

Explain with the help of table -

- 4 kilometer =meter
- 7 meter = centimeter



- 9 centimeter =millimeter
- 5 feet =inch
- $2\frac{1}{2}$ yards =feet
- 3.5 kilometer=meter
- 2.75 meter = centimeter
- 8.5 centimeter = millimeter
- 6.25 feet =inch

To convert centimeters to millimeters	To convert feet to inches	To convert yards to feet
1 centimeter = 10 millimeters	1 feet = 12 inches	1 yard = 3 feet
2 centimeter = 10 millimeter + 10 millimeters = 20 millimeters	2 feet = 12 inches + 12 inches = 24 inches	2 yards = 3 feet + 3 feet = 6 feet
7 centimetres = 7×10 millimetres = 70 millimetres	6 feet = 6×12 inches = 72 inches	3 yards = 3×3 feet = 9 feet
To convert centimeters to millimeters, we multiply by 10	To convert feet to inches, we multiply by 12.	To convert yards to feet, we multiply by 3

Bhola's Bullockcart—

Bhola was going to the grain market with his grandfather, carrying grains in a bullock cart. The grain market was 2 km away from their house.

Answer —

1. If the total distance covered in one revolution of the bullock cart wheel is 2 meters, then how many revolutions (rotations) will the bullock cart wheel make to reach the grain from market to home?

- 
2. If the speed of the bullock cart is doubled, then in how many revolutions will the wheel take to reach the mandi?
 3. If the school is situated between the mandi and the house, then how many kilometers will the bullock cart have to cover to reach the school from the house?

Teacher : So far, we have converted a bigger unit into a smaller unit. Now, let us convert a smaller unit into a bigger unit.

To convert a smaller unit into a larger unit, we have to divide ($\div$) it.

Let us understand-

We know that, 1 meter = 100 cm. In 1 cm, $1/100 = 0.01$ m (here we have to divide by 100) To convert 20 cm to meter, $20/100 = 0.20$ m That is 20 cm 0.20 m	For example, 1 feet = 12 inches then 1 inch = $1/12$ feet. If someone's height is 36 inches, then in feet- $36 \text{ inches} = 36/12 \text{ feet}$ $= 3 \text{ feet}$ that is, 36 inches = 3 feet
--	--

Practice Work

1. Change the unit-
 - (i) 300 centimetre into metre.
 - (ii) 6000 metres into kilometre.
 - (iii) 48 inches into feet.
 - (iv) 750 centimetre into metre.

2. Fill in the blanks-

- (i) 5 kilometres = metre
- (ii) 2500 metres =kilometers
- (iii) 7 feet = inches
- (iv) 72 inches = feet
- (v) 4 yards =feet
- (vi) 15 feet =yard
- (vii) 9 kilometre =metre
- (viii) 3500 metre=kilometre
- (ix) 11 feet =..... inches
- (x) 48 inches = feet

3. Solve-

- (i) The distance from Ram's house to the school is 4 kilometers. What will be this distance in meters?
- (ii) Sunita's height is 5 feet. Find her height in inches.
- (iii) The length of the classroom board is 96 inches. Convert it into feet.
- (iv) The width of the playground is 15 yards. Convert it into feet.
- (v) The width of the room is 18 feet. What will be this width in yards?
- (vi) The distance of the market from Amit's house is 2500 meters. Convert the distance in kilometers.

Lesson - 14

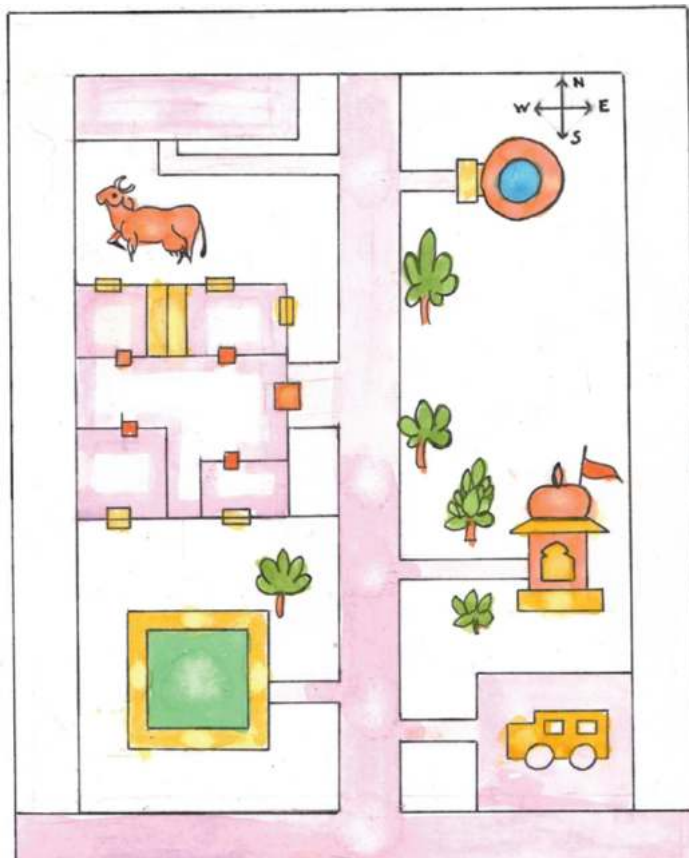
Let's Look at the Map



Ramu's father is getting a house built. He has already got the map prepared from architect Renu so that the house has all the necessary facilities. Renu told that this is a rough (kaccha) map.

Come, let us all together read and understand the map of their new house-

The map shows the outer fencing, main building, cattle shed, well, temple, garden along with vehicle parking.



Look at the map and answer -

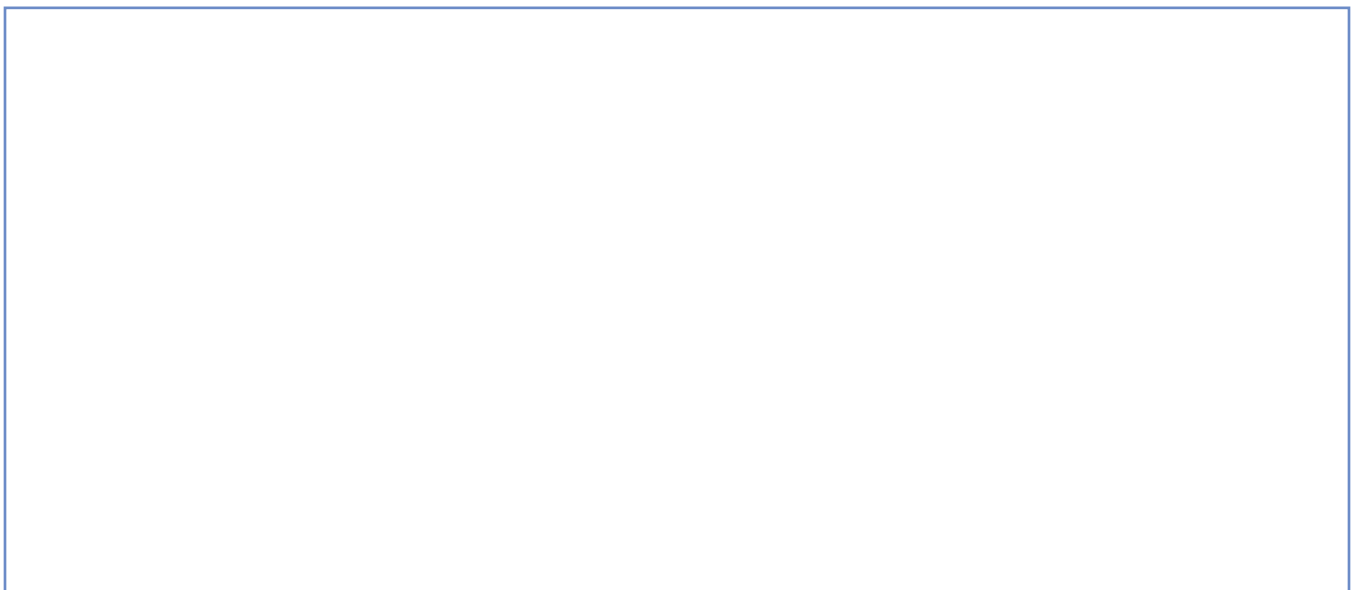
- In which direction is the garden from the main building?
- In which section are the roads shown?
- Is the temple building occupying more space or the cattle shed?
- In which direction of the temple the main building ?
- How many roads come out from the main road of the house?
- What occupies the largest space after the main building?

- If you had to suggest some changes in the map, what would you suggest?

Ramu asked Renu, you were saying that this is a rough (kaccha) map. What is this rough (kaccha) and final (pakka) map? I have heard about ripe-unripe (kaccha and pakka) only for fruits.

Rough (Kaccha) Map	Final (Pakka) Map
When we make the initial outline of a place, it is called a rough map . This map is usually made on plain paper which contains information about the main places. Like where is the road, where is the house, where is the tree. In this, the scale, direction or measurement is not equal. It is made on the basis of estimation.	When we make a rough map with accurate measurement, direction and scale then it is called a final map. A final map is mostly prepared on a graph or on special map papers. It is used for government records or formal purposes. This map is also called a blue print or blue paper.

Make a rough (kaccha) map of your house-





Renu told that while making a final (pakka) map, some things are taken special care of. Like-

Direction : We should have correct knowledge of directions, so that the different parts of the house can be built at the right place.

Space and number of rooms : How many rooms will there be in the house and which room will be located where, like kitchen, toilet, living room, bedroom etc.

Shape recognition : Rooms are usually square or rectangular in shape. We should keep these shapes in mind while making the map.

Estimated measurements : The length and breadth of each room is estimated and shown on the map because we get the rooms constructed as per our requirement, so some rooms are bigger and some are smaller.

Doors and Windows : How many doors and windows will there be in the rooms and where?

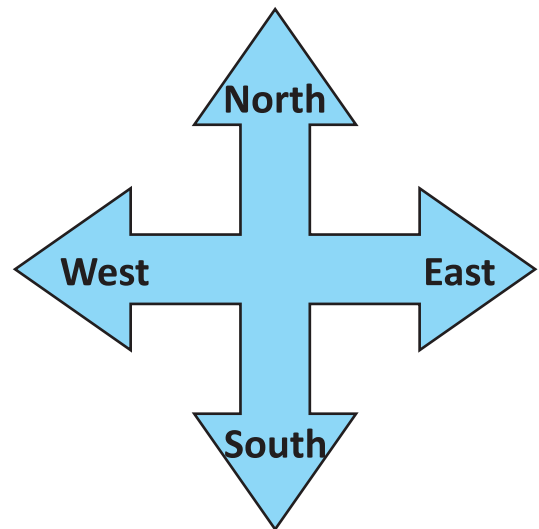
Open space : Like courtyard or veranda, their location is also shown on the map.

Scale : The map is small, so the actual measurement is shown in a smaller scale. Generally, 1 centimeter = 1 meter, i.e., the measurement of 1 centimeter in the map is equal to 1 meter.

The scale of final (pakka) map : is 1 cm = 1 meter.

Know the Scale-

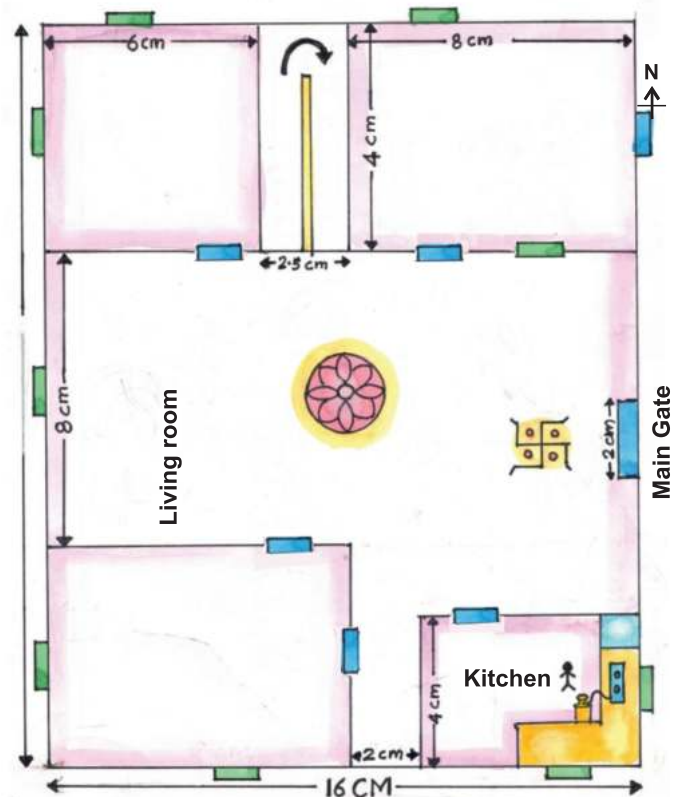
- The side which you see as 1 cm on the map will actually be 1 meter when the house is being built.



- Similarly, the side which you see as 6 cm on the map will actually be 6 meters when the house is built.

Look at the map of the building and answer-

- In which direction will the kitchen be when entering from the main gate?
- Count the doors of all the rooms.
- Find the length of the kitchen in metres.
- How many windows are there in all the rooms together?
- What is the width of the living room in metres?
- Which two rooms have their doors facing each other?



Let us also make a Map-

- Make a Rough (Kaccha) Nazari naksha of your classroom showing the door, blackboard, windows, etc.
- You will be well acquainted with your school. Make a rough (kaccha) map of your school and its surroundings showing the prayer hall, library, kitchen, office, classrooms and playground.

Below is given a final (pakka) map of a house which Renu had made. In a hurry, Renu forgot to write the measurements of the rooms. Think and write down the measurements of all the rooms of the house and help Renu. The blue line is the door, the orange line is the window.

Home measurements-

Parking- X

Verandah - X

Living room- X

Bedroom 1- X

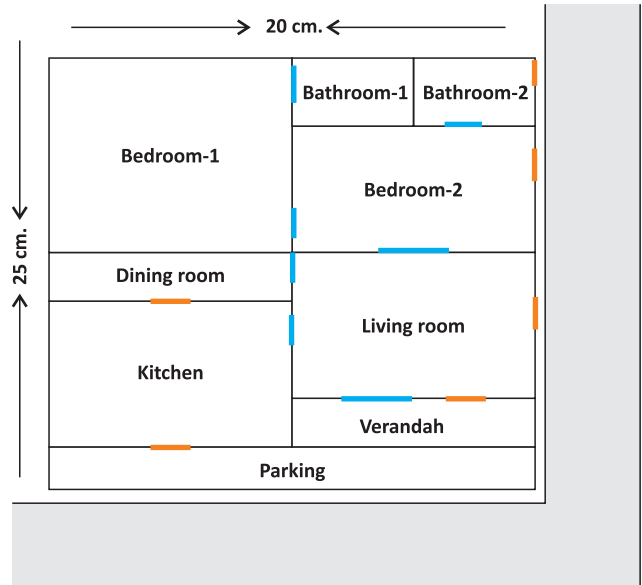
Kitchen - X

Dining room- X

Bedroom 2- X

Bathroom 1- X

Bathroom 2- X



Which is bigger - the kitchen or the veranda? What is the difference in the area of both?

Is the dining hall bigger or bedroom-2? What is the difference in the area of both?

Renu told Ramu's family that the hall of the main house is square while the kitchen is rectangular. In most houses, the hall and kitchen are of this shape. Do you want to make any changes in it?

Everyone said that no changes are needed. You just find out their area and perimeter.

Renu said, yes and told them the measurements of all after adding up.

Hall (Square)	Kitchen (Rectangular)
Side of the hall = 6 meters	Kitchen length = 4 meters Kitchen width = 3 meters



Perimeter of square = $4 \times \text{side}$ = $4 \times 6\text{m} = 24 \text{ meters}$	Perimeter of rectangle = 2 (length + width) = $2 (4+3)$ = 14 meters
Area of the Hall = side $\times$ side = $6 \times 6 = 36 \text{ square meters}$	Area of the Kitchen = length $\times$ breadth = 4×3 = 12 square meters

Practice Work

1. Kamal went to a village fair 12 km away in his jeep. On his return journey, he met his friend and came home by a route of 15 km. How much more distance did he cover while coming back than while going?
2. A shopkeeper had a 9 meter long chunari from which he cut 4 meters and gave it to a customer, then how much chunari was left with him?
3. The length of a farmer's field is 85 m and the width is 60 m. What will be the total length of the fencing around the field?
4. There is a square room in Ramesh's house whose side is 5 meters long, so what will be the perimeter and area of this room?
5. How much money will be spent to decorate the walls of a square room of length 6 metres if coloured strips are used at the rate of Rs 8 per metre?
6. In a boat trip in a lake, 4 children first covered a distance of 300 meters. While returning, they covered a distance of 200 meters, so what is the total distance covered? If the boatman has to be paid Rs. 10 per 100 meters, then how much money will have to be paid?





7. Ramlal goes to his grocery shop by walking 2 km every day. He returns home on foot in the evening. How much distance will be covered by Ramlal in a week?
8. If the length of Seema's garden is 200 meters and width is 150 meters, then tell the perimeter and area of Seema's field.
9. Make a rough (kaccha) map showing the main places of your village.

We Learnt and Understood - III



1. You have a half-litre water bottle. If you want to fill a 25 litre bucket with it, how many times will you have to pour water from it?
2. Rama has to drink 10 ml medicine three times a day. How many ml medicine will she drink in a day? If the medicine bottle is of 200 ml then for how many days will the bottle last?
3. A shopkeeper has only half litre and quarter litre measures. If a customer asks for 1.25 litres of milk, from which measure and for how many times will he give milk?
4. Rita bought 8 litres 300 ml of oil on Monday and 6 litres 800 ml of oil on Tuesday. How many litres of oil was bought in total on both days?
5. Deepak has a can which has a capacity of 5 litres of kerosene. If he has to fill 9 cans completely, how many litres of oil will he need in total?
6. If 500 ml packets are made from 10 litres of milk, then how many packets will be made in total?
7. If a bottle has a capacity of 2 litres of water and you are filling a 38-litre tub with it, then tell how many times water will have to be filled from the bottle to fill the tub completely?
8. Sonu has a scale at home which is digital. Sonu put a 5 kg flour packet on it and the weight came out to be 4 kg 600 grams. How many grams of flour was less?
9. 750 kg of potatoes were grown in one field and 950 kg in the other. How much more potatoes were grown in the second field than the first?
10. Which of the items given below will be measured in millilitres and litres?



- Hair oil
 - Petrol in the car
 - Eye drops
 - Cow's milk
 - Water for cow
11. Three people in a field together pick a total of 150 kg of tomatoes in 1 hour. If they have to pick 1200 kg of tomatoes, how much time will they take?
 12. If Ramesh's school starts at 9:55 am and ends at 3:25 pm, then how many hours does he spend in school?
 13. A train arrives at Jaipur station at 14:40 and departs at 15:00. How long does the train stop at the station ?
 14. Pooja's watch shows 1 hour 45 minutes and Ramesh's watch shows 2 hours 20 minutes. Find the sum of the two timings.
 15. Pooja bought 1.5 kg of ladyfinger from the vegetable market which cost Rs. 90 per kg. How much money in total did she pay?
 16. If a person walks 120 steps in 1 minute, then how many steps will he walk in 1 hour?
 17. Reema bought 3 meters 75 cm long cloth. What will be the total length in centimetres only?
 18. A child is 2 feet 6 inches tall. Find his height in inches only.
 19. If 1 meter = 100 cm, then how many centimetres will be there in 6.5 meters?
 20. The distance from a field to the road is 2.25 km. What will this distance be in meters?





21. If the length of a scale is 30 cm, then what is the total length of 5 such scales in millimetres.
22. Arjun divided a 7 cm long piece of wood into 10 equal pieces. How many millimetres long will each piece be?
23. If in the map, the kitchen is on the right side while entering from the main gate and its length is 4 cm, then tell the actual length of the kitchen in meters? (Scale 1 cm = 1 meter)
24. In the map, the living room and the bedroom are facing each other. What advantage can there be if the windows of both the rooms are also facing each other?
25. The distance between two places is shown as 3 cm in a map. If the scale of the map is 1 cm = 2 km, then what will be the actual distance between the two places?
26. If the area of the temple is twice the area of the animal enclosure and the area of the enclosure is 6 square cm, then what will be the area of the temple in square cm?
27. Make a map of your school showing the prayer assembly area, library, office, kitchen and three classrooms.
28. A road goes straight north. If you turn right, in which direction will you go?
29. What things should be kept in mind while making a map?
30. If the main building has three windows and two doors, then how many exits will there be in total?
31. Convert kilometre into meter-
 - (i) 5 kilometres
 - (ii) 10 kilometre
 - (iii) 7.5 kilometres
 - (iv) 10.7 kilometre





32. Convert hours into minutes-

- | | |
|--------------------------|------------------------|
| (i) 12 hours | (ii) 7 hours |
| (iii) 3 hours 45 minutes | (iv) 1 hour 15 minutes |

33. Convert grams into kilograms-

- | | |
|------------------|------------------|
| (i) 1250 grams | (ii) 7100 grams |
| (iii) 2275 grams | (iv) 10020 grams |

34. Convert Rupees into Paise-

- | | |
|--------------------------|-----------------------------|
| (i) 3 rupees 25 paise | (ii) 5 rupees 75 paise |
| (iii) 10 rupees 50 paise | (iv) 20 rupees and 30 paise |

35. Convert meter into kilometre-

- | | |
|-------------------|------------------|
| (i) 3800 metres | (ii) 4650 metres |
| (iii) 8050 metres | (iv) 2500 metres |



Lesson - 15

Neena's Birthday



Neena's friends are making a card for her. They will give this card to Neena as a gift on her birthday.

Rohan : Let's decorate these cards.

Sonal : Why don't we put shiny tape in the front of it all around?

Rohan : There is only a little tape left in it but probably enough for the card.

Both of them apply the tape together.

Sonal : What should we do now? It is finished.

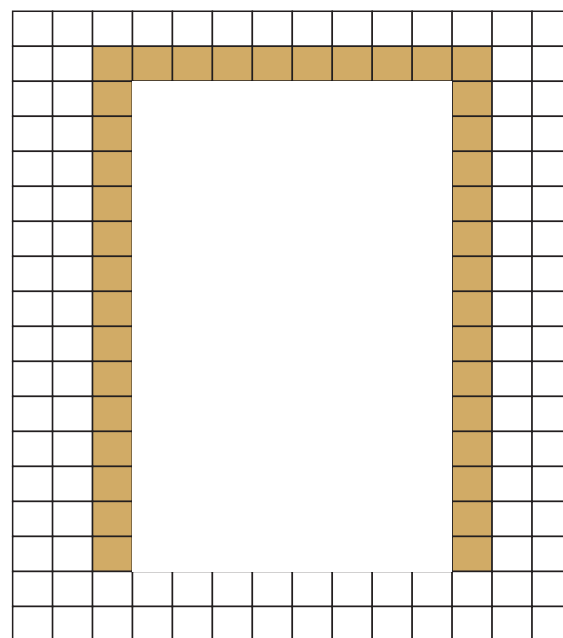
Rohan : We need some more tape.

Can you tell how much long tape has already been pasted on the card? How will you measure it?

The square made on the grid is one centimetre long. In the previous class also, we had measured on such a grid.

Till now centimetre long tape has been pasted.

Sonal measured it with a scale and saw that right now centimetre long tape is required more. Sonal asked her





friend for that much tape and paste it on the card.

Rohan : Sonal, how about sticking a thick shiny silk thread around these pictures?

Sonal : Ok Rohan. But let's see how much long thread is needed.

Rohan : All these pictures are rectangular. We have to find out the length of their four sides and add them all. This will be the perimeter of the rectangle. Thread equal to the perimeter is required.



How much long thread is needed around the picture of the cake?

The sum of the four sides of the picture of the cake placed on the grid
 $= 5 + 8 + 5 + 8 = \dots\dots\dots$

For the picture of the candle centimetre long and for the flower picture long thread is needed.

Let's find out the perimeter of the rectangle-

Image	Length	Breadth	Perimeter
	8	5	
			
			



Do you see any relation between the perimeter, length and breadth of the Rectangle?

Sonal : Here, in every Rectangle, we add the length twice and the breadth twice.

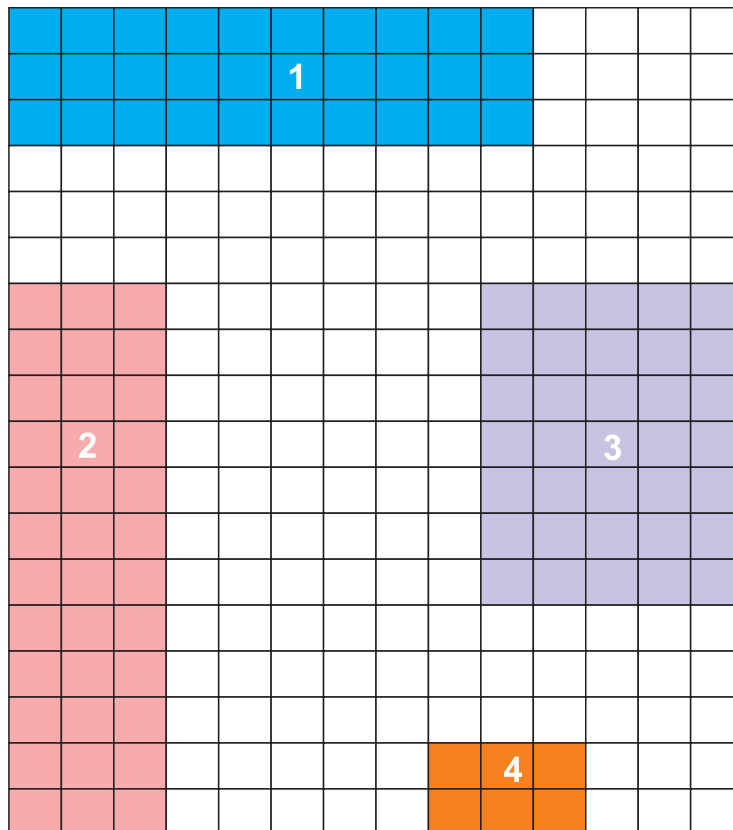
Rohan : If we double the sum of the length and breadth, we can find out the perimeter of a rectangle.

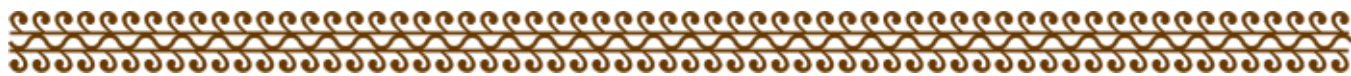
$$\text{Perimeter of Rectangle} = 2 (\text{length} + \text{breadth})$$

Rohan : The sides of a square are all equal. Its perimeter will be four times the length of the side. Therefore, the perimeter of enclosed shapes formed by 3 or more than 3 sides is equal to the sum of all their sides.

Let's practice -

1. Some rectangles are drawn on a grid paper below. If the side of the square on the grid paper is 1 centimetre, then find the perimeter of each rectangle-





Shape	Length(cm)	Breadth (cm)	Length + Breadth	Perimeter
Rectangle-1				
Rectangle-2				
Rectangle-3				
Rectangle-4				

Activity :

Look at square and rectangular objects in your classroom and find out their perimeter ?

Cut out any four pictures from the newspaper. Arrange them together in such a way that a photo frame of the smallest dimensions is required. For this, you can also try placing the pictures on a copy of math book.

Sonal : We have already calculated the perimeter of the pictures that will be put on the cards. Why don't we also find out how much space these cards will take.

Rohan : We will find out by counting the squares. We did this in the previous class also.

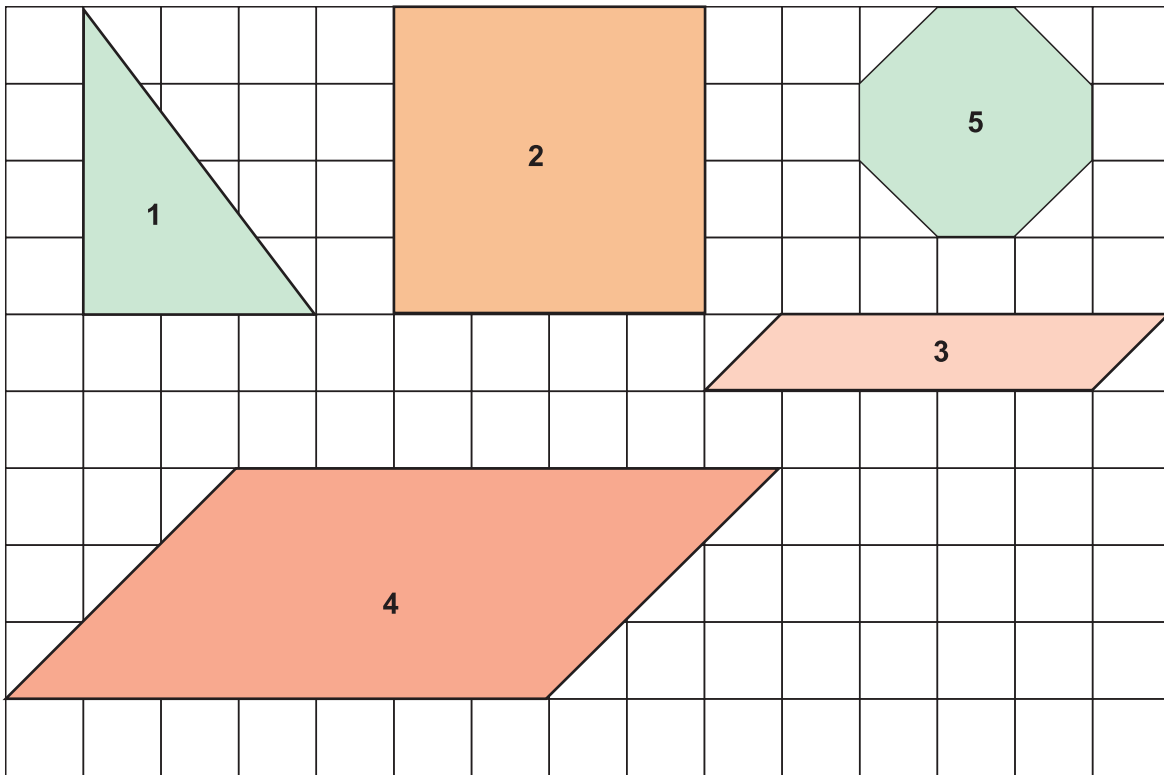
The picture of the cake has covered 40 squares. Since the length of each square is 1 centimetre, the area of the picture of the cake will also be 40 square centimetres.

The area of the picture of the candle is square centimetre and the area of flower picture is square centimetre.





Write the Area of the given shapes in square centimetres—



Let's understand the area of a rectangle-

Image	Length	Breadth	Area
	8	5	40
	4	3	12
	5	2	10

Do you see any relation between the length, breadth and area of the rectangle?



Sonal : This means we don't need to count the squares every time. Multiplying the length and breadth will give the area of the rectangle.

Therefore, $\text{Area} = \text{length} \times \text{breadth}$

Since all the sides of a square are equal, the area of the square = side $\times$ side

Activity-

We place a matchbox on a grid paper in different ways which are as follows-

Now count and answer -

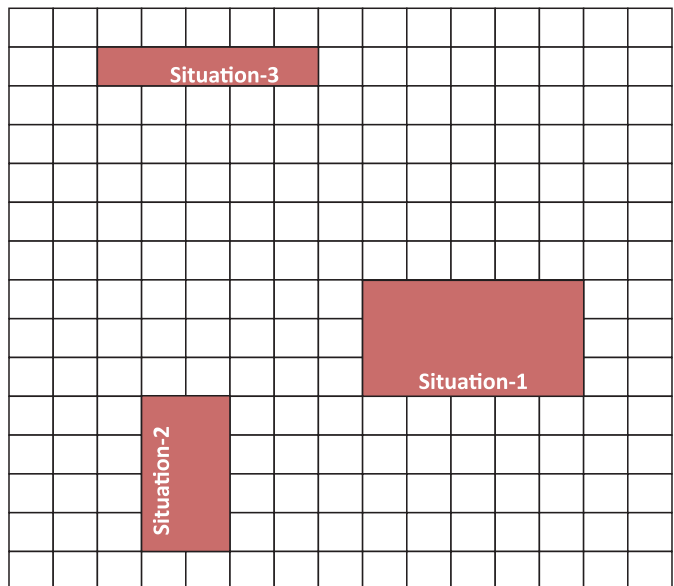
- Number of cells in situation (1) =

Area of larger surface of matchbox is and perimeter is centimetres.

- Number of cells in situation (2) = = Area of side surface of matchbox =
Perimeter =

- Number of cells in situation (3) = Area of the surface of matchbox = Perimeter =

Which surface has covered more squares =

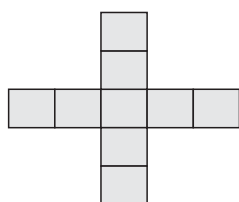
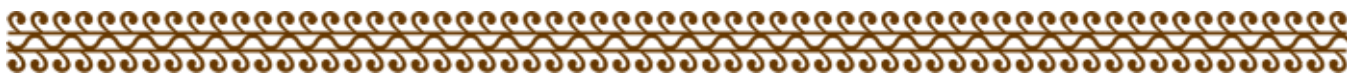


Learn by doing -

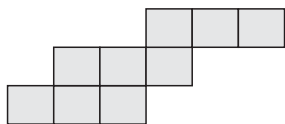
You can also keep the duster, geometry box, sharpener, eraser, scale etc. in different ways and find the area and perimeter on a grid paper.

Mahima has made some shapes by taking 9 square boxes of side 1 cm-





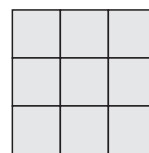
(1)



(2)



(3)



(4)

Observe the number of cells (area) and external measurement (perimeter) of these shapes and write it in the note book.

Try it yourself -

- (i) Draw a rectangle in your notebook of length 7 cm and width 5 cm and find its area and perimeter.
- (ii) With the help of your classmate, draw a square of side 8 cm and find its area and perimeter.
- (iii) Find the perimeter and area of a rectangle 12 cm long and 15 cm wide on a grid of 1 cm x 1 cm cells.
- (iv) The width and length of a cloth is 12 cm. How much long lace border be required around it?
- (v) The length of each side of a square plot is 9 m. Find its area.
- (vi) The length of a garden is 12 m and width 10 m. Find its area.
- (vii) The length of one side of a square garden is 8 m. How much long wire will be required to fence the garden?

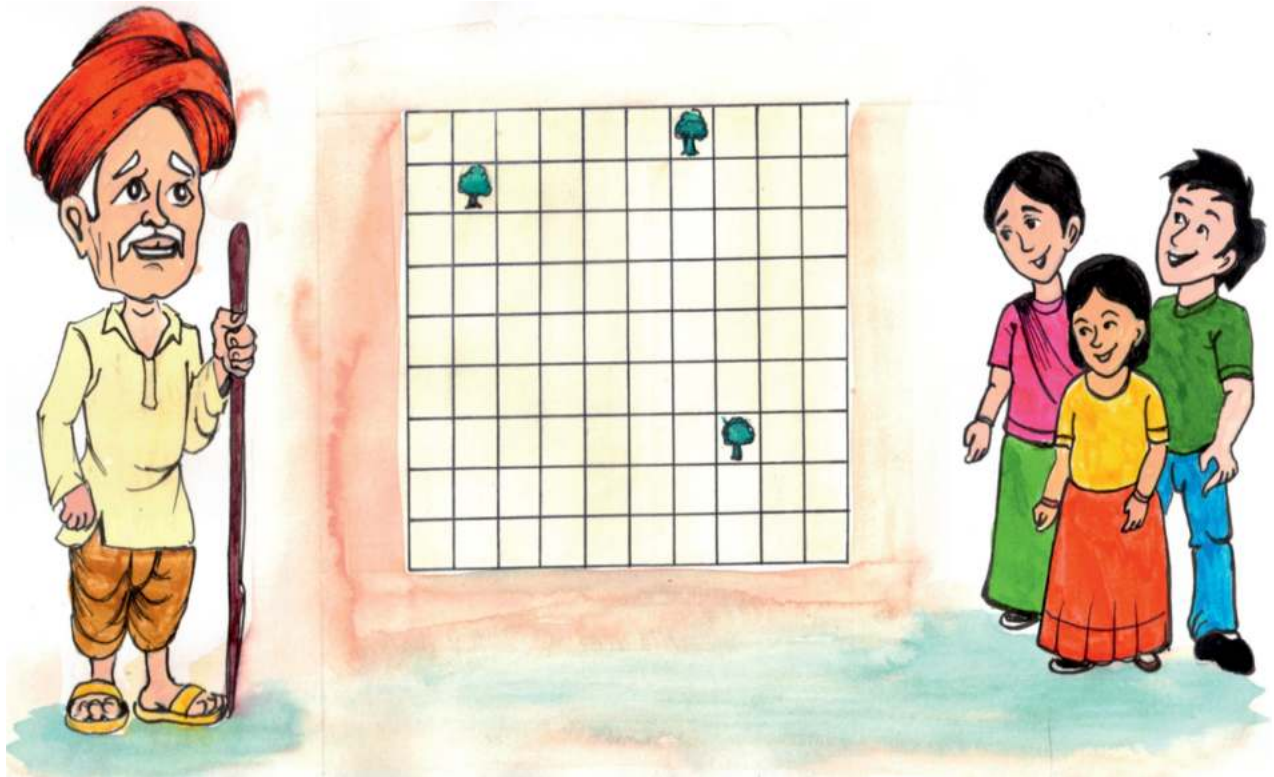
Division of Farmland-

Raju is a farmer who wants to divide his land equally amongst his three children Vimla, Ujjwala and Randeep. He wants to divide the land in such a way that each of them gets one tree.





The land looks something like this-



Can you divide the land into equal parts? Demonstrate and show how you will divide it? Remember that each one should get a tree. Colour each child's land with a different colour.

If each small square in this picture is considered equal to one square meter, then how much land will each child get?

..... square meters.

- How many metres of wire will Vimla need for fencing?

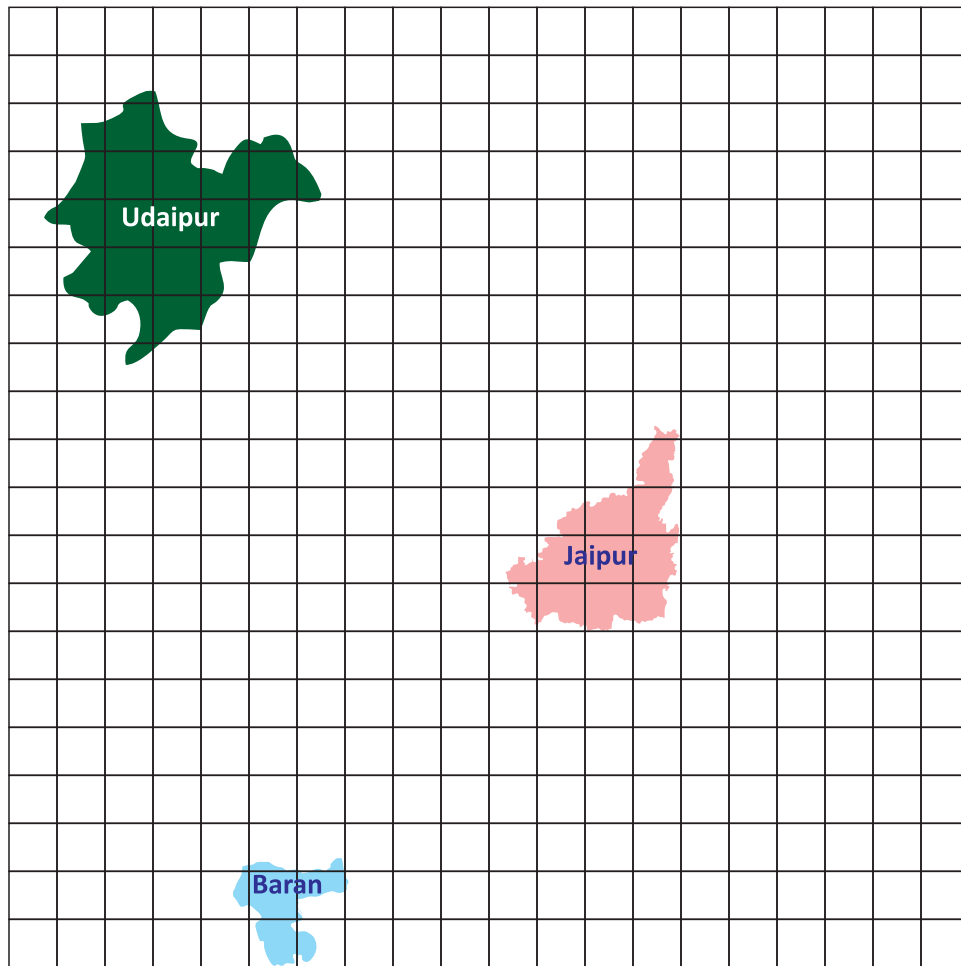
.....

- How much wire will all three of them require in total?

.....

- Find the area of the shares of Vimla, Ujjwala and Randeep.

.....



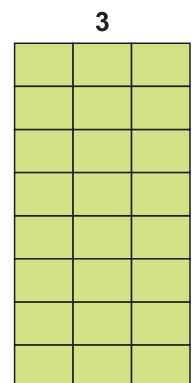
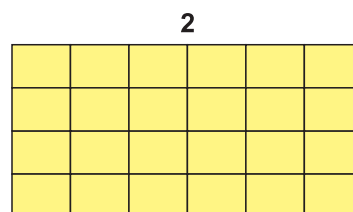
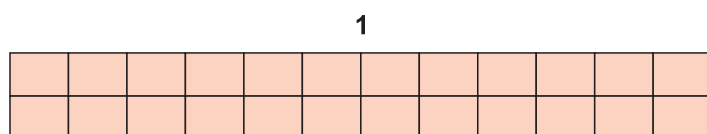
Look at the map and tell which district has the maximum and minimum estimated area?

Maximum area =

Minimum area =

Tile game -

Sonal took 24 square tiles in the class and arranged them in different shapes.





The Area of the first figure is 24 square centimetres. Its perimeter is 28 centimetres.

The area of the second figure is also 24 square centimetres but the perimeter is centimetres.

Do all of them have the same area?

Do all of them have the same perimeter?

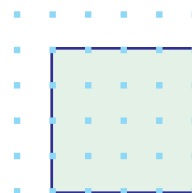
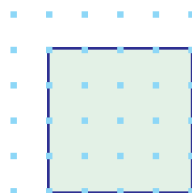
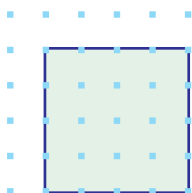
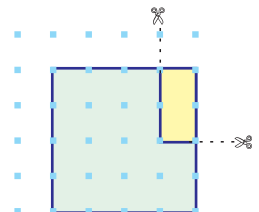
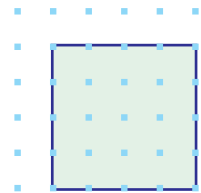
You also make two shapes with these tiles which have different perimeters.

Let's try it-

Rohan has drawn a square on the dotted grid whose perimeter is 16 cm and area is 16 square cm.

Sonal cut it from one corner. Now its perimeter is 16 cm while the area is only 14 square cm.

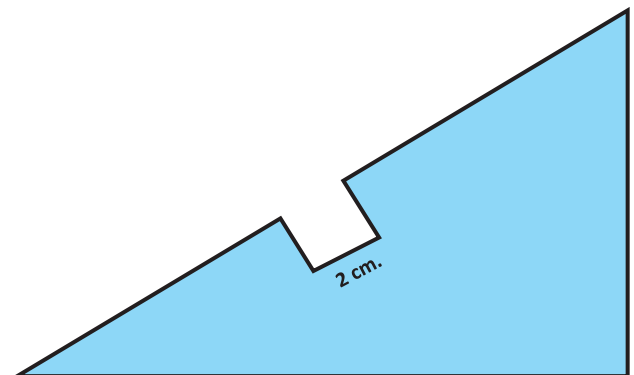
Like Sonal, you too should cut the square made by Rohan in three ways such that its perimeter does not change. And find how much the area got reduced.



Teacher's instruction : Give children the opportunity to discover that the area can change even if the perimeter remains the same. Similarly, the perimeter can change even if the area remains the same.

Find out -

1. The perimeter of the given triangle is 30 cm. If a square of side 2 cm long is removed from it, then what will be the perimeter of the remaining part?



2. From the square shown in Figure-1 below, 8 squares of 1×1 cm are cut out as shown in Figure-2. Then find the perimeter of the new figure.

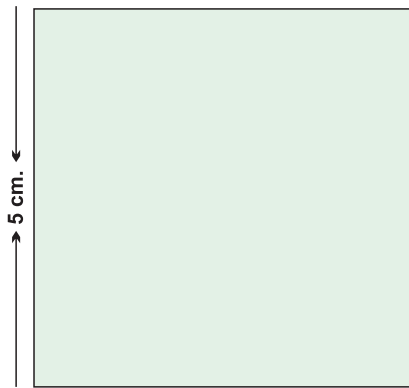


Figure-1

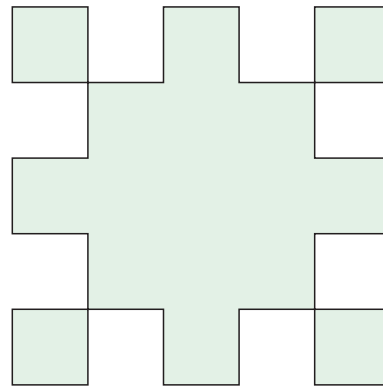
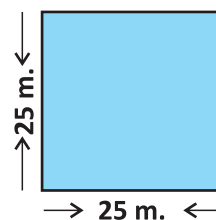
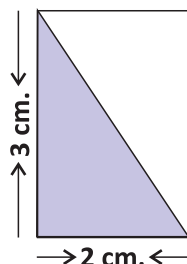
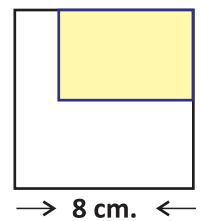


Figure-2

Practice Work

- Write the formula to find the area and perimeter of the following figures- (i) Rectangle (ii) Square
- The length of a rectangle is 40 cm and width is 60 cm. Then find its area and perimeter.
- A boundary wall has to be built around a rectangular field. If the length of the field is 50 meters and the width is 40 meters, then how many meters of the boundary wall will have to be built?
- What will be the perimeter of the remaining shape of the given square if a piece of 4 cm length and 6 cm width is removed from it?
- Find the area of the shaded region in the given figures-



Lesson - 16

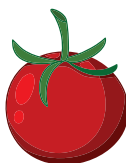
Rama's Kitchen



There were many utensils, boxes etc. kept in Rama's kitchen. While cleaning, took some items out from the kitchen.



Some other items have also been kept from the kitchen which are round in shape such as-



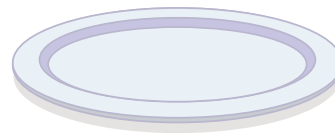
Find out in your home kitchen-

Draw and name the other things that are present in your kitchen but are not shown here-

Name and draw the pictures –

S.No.	Name of object	Picture of object	Special description

If you look at these utensils carefully, some of them will look like circular shapes. What are such shapes? Discuss.



There are some things in the kitchen which have a cylinder-like shape. What they are? Discuss-



There are some things in the kitchen whose shape is similar to that of an ice cream cone. What are they?

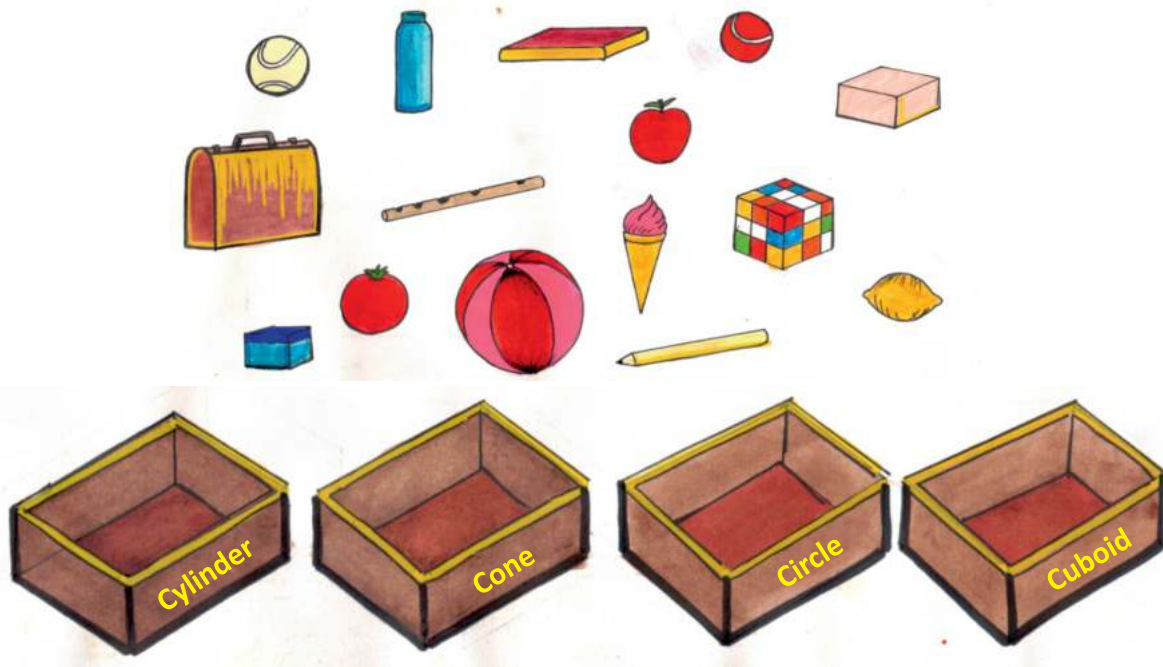


Can you think of more shapes?

There are some things in the kitchen whose shape are like a cuboid. What are they?

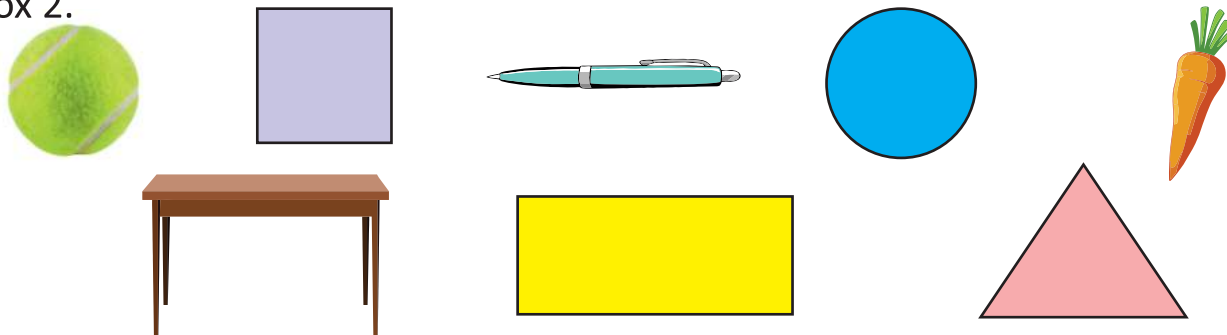


Put the given objects in the given boxes according to their shapes. While placing them, say their names also.



If any shape box is not visible then where was it placed and why?

Identify the pictures given below and write the names of two-dimensional shapes in Box 1 and the names of three-dimensional shapes in Box 2.

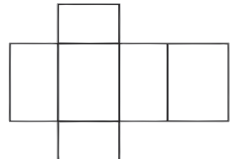


Box-1

Box-2



Children, have you opened and flattened the incense stick boxes, paper boxes, ghee packing boxes etc. How do these boxes look after opening them? Let us make a grid diagram of these boxes.

S.No.	Basic shape of the box	Shape after opening the box
1.		
2.		
3.		

Try it -

- Make a cuboid shaped box from a sheet of paper.
- Make a birthday cap out of an old newspaper.
- Make a cylinder from a card sheet.
- Make a sphere from clay.



Children, you made a cuboid shaped box out of paper. Can you keep anything in it?



Yes, we can keep things like chalk, pebbles, toffees etc. in this box made of paper.



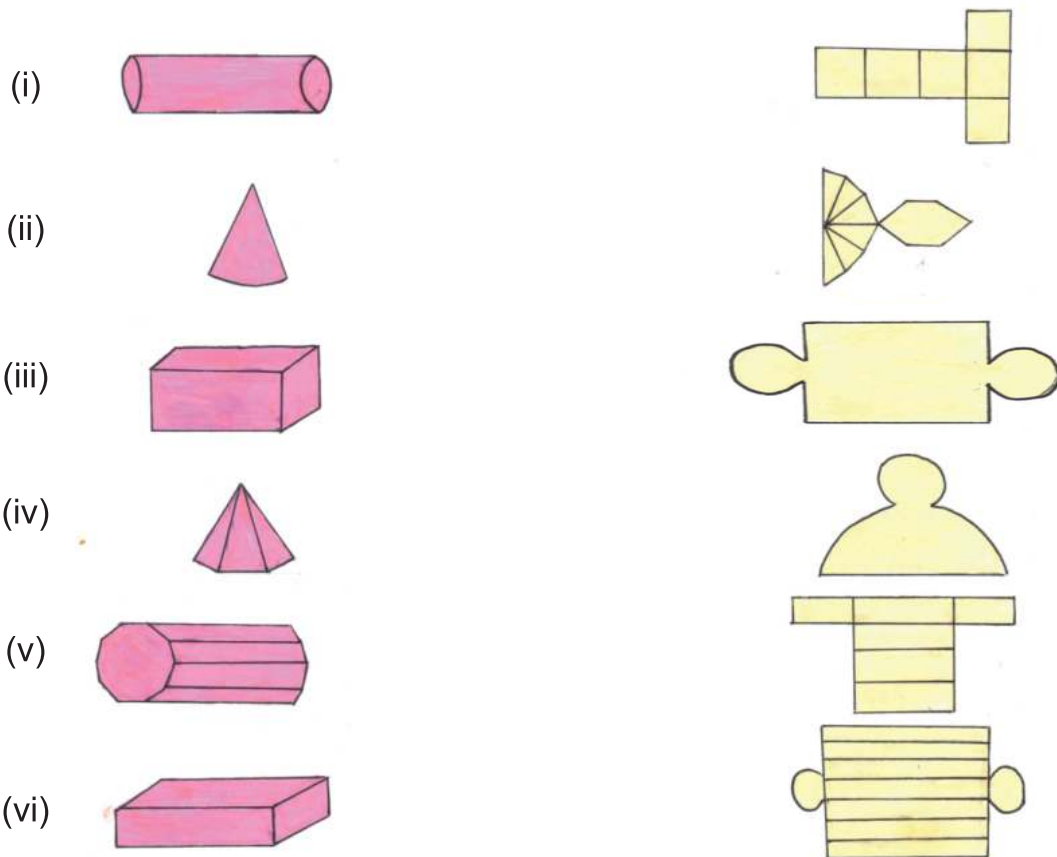
A paper has a length and a breadth whereas a box made of paper has depth too. Therefore, since a paper has length and breadth, it is called a two-dimensional figure and a box made of paper has length, breadth and height, it is called a three-dimensional figure.





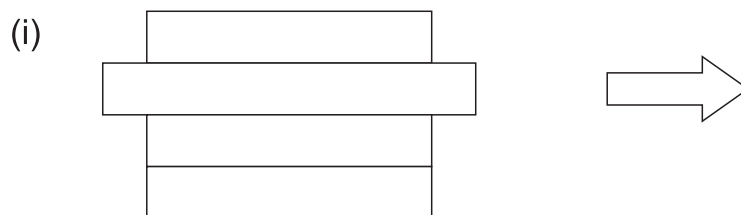
Various three-dimensional shapes have faces, edges and vertices. A sphere has curved edges but no faces and vertices. Similarly, a cylinder has curved edges but no vertices.

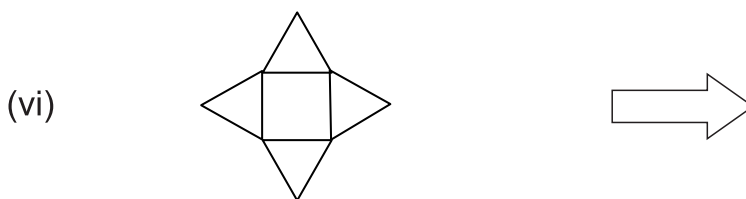
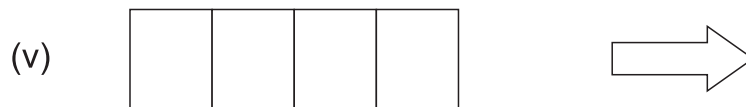
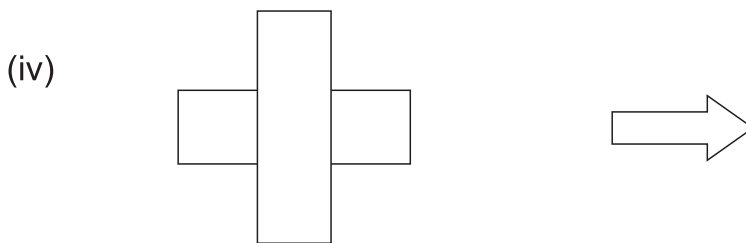
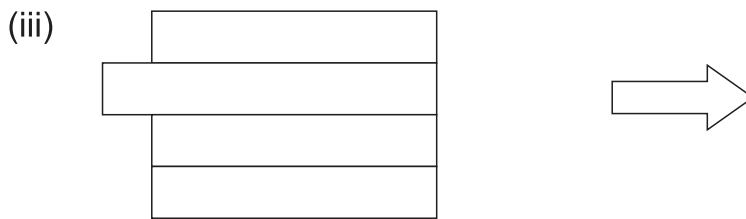
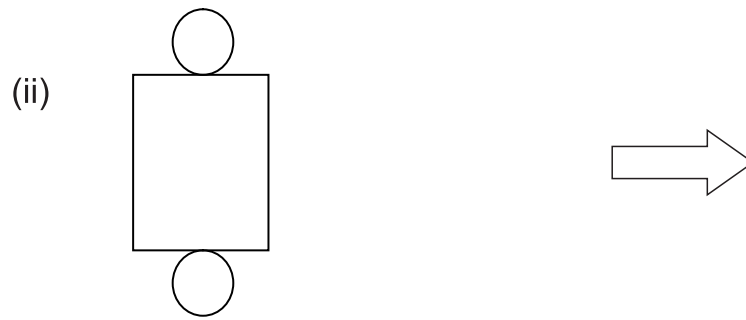
Which two-dimensional shape will be formed by making a flat surface net of the three-dimensional figures given below. Match :



Try it -

Make three dimensional figures from the following net pictures using card sheets of paper and also write their names—



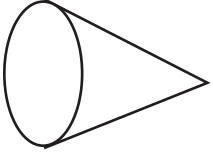
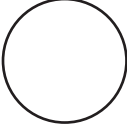
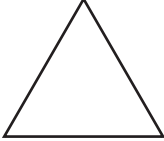
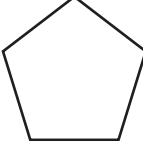
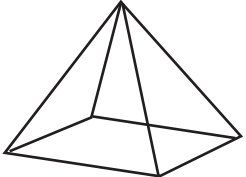
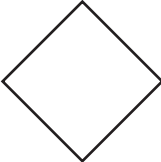
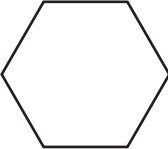
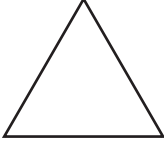
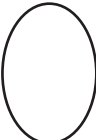
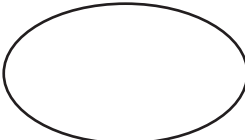
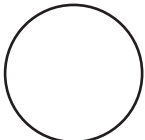
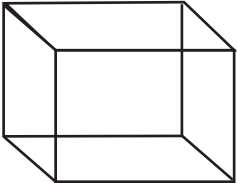
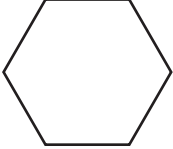
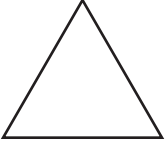


Explore -

- Find three-dimensional objects in your bag and write their names.
- Make a list of the objects in the class that have three dimensional shapes.

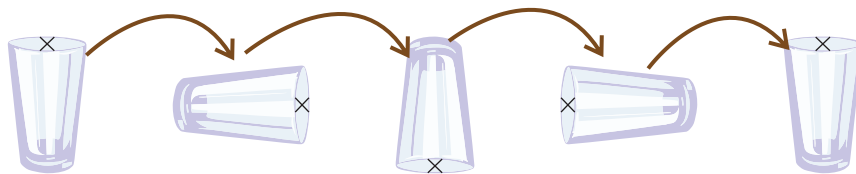


How do the following three-dimensional shapes which are given below look when seen from top, left or right? Put a tick mark (✓) on the picture-

(i) 	seen from the left side   
(ii) 	seen from top   
(iii) 	seen from the left   
(iv) 	Seen from the right side   
(v) 	seen from top   

Moving objects -

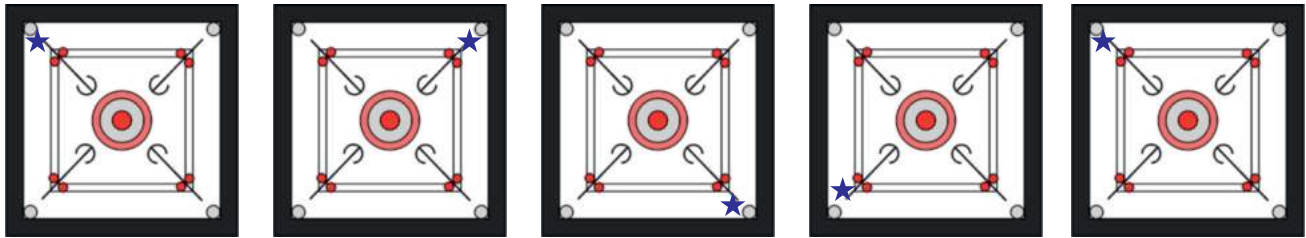
Let's take a look at certain things by turning them round.



After rotating the glass at four right angles, it returns to its original position.

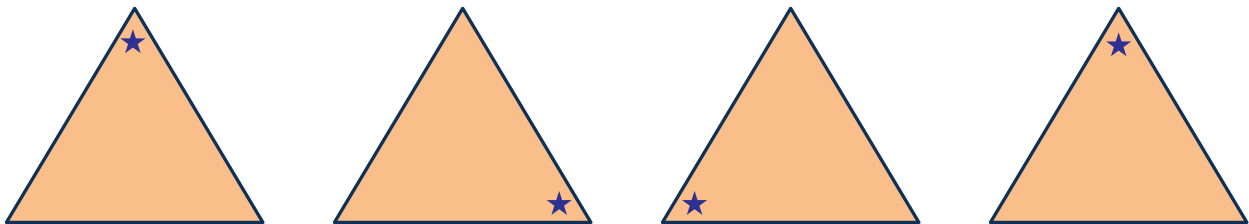


When a carrom board is rotated right angles, it comes back to its original position.

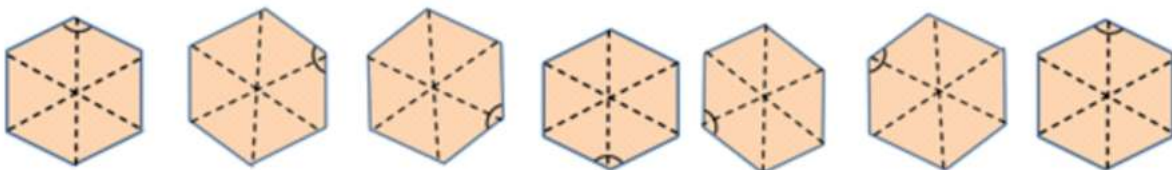


A ball, when rotated to any number of times, it always appears to be in its original state.

Let us look at the shape of an equilateral triangle by turning it round and round.



Let us look at the regular hexagon figure by rotating it round and round.



In this way, how many times should a regular hexagon be rotated before it comes back to its original position?

The number of times a symmetrical geometrical figure is rotated one full rotation (360°) about a point or axis and when looks like the original figure, it is called the order of its rotation symmetry.

The number of times a three-dimensional figure is rotated and it comes back to its original state is called its rotation. For example, a glass comes back to its initial state after being rotated four times. Hence its rotation is four.

Take some more objects and find their rotation.

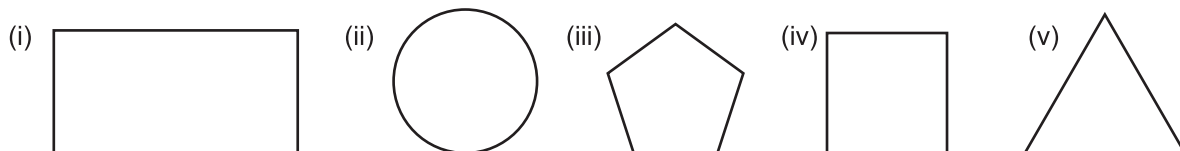


Practice Work

1. Identify the given objects and write the name of their three-dimensional shape-

Object	Three-Dimensional Figure
	
	
	
	
	

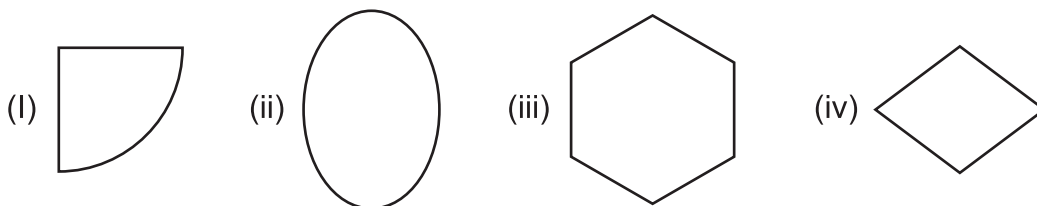
2. Explain the difference between two-dimensional and three-dimensional shapes.
3. Draw rotational diagrams of a wooden block, button, coin and pen and also write their rotational symmetry order.
4. State the order of rotational symmetry of the given figures.



5. Write the number of faces, edges and vertices of the following three-dimensional figures-

S.No.	Picture of object	Face/Surface	Edge	Vertices
1.				
2.				
3.				
4.				
5.				

6. Write the names of objects whose edges are curved?
 7. Write the names of objects which have edges but no vertex?
 8. Write the number of edges and vertex of the following pictures-

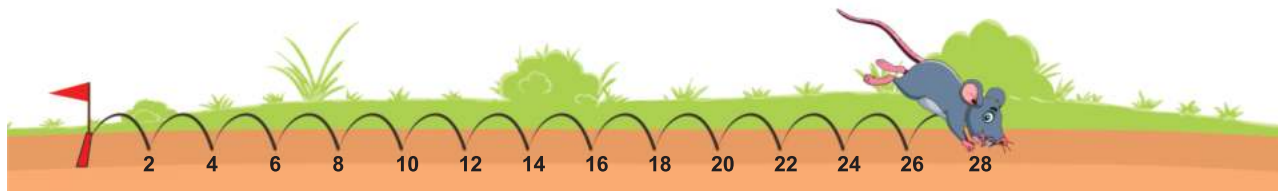
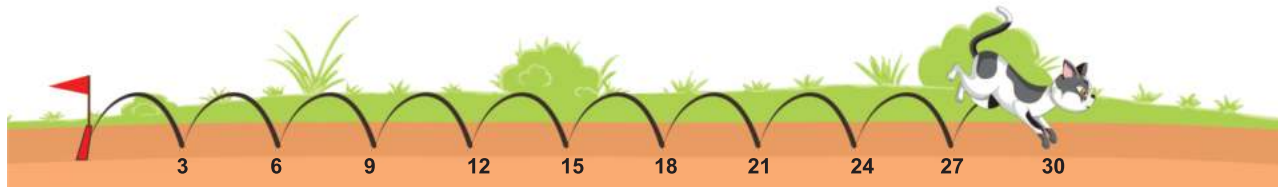
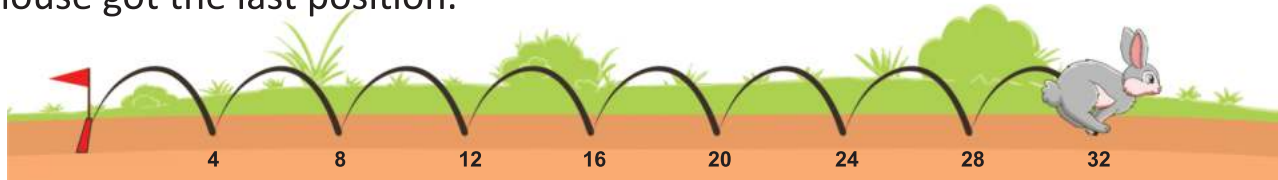


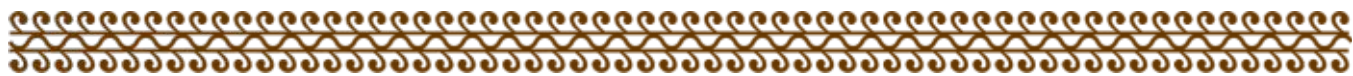
Lesson - 17

Sports Competition



In Dholakpur village, Sports competitions were organized. The first competition was a race in which a rabbit, a cat and a mouse took part. As soon as the race started, rabbit took 4-4 jumps, cat took 3-3 jumps and mouse took 2-2 jumps and started running. In this race, the rabbit ran fast and reached the destination first and got the first position. The cat got the second position and the mouse got the last position.





To complete the race along the given trail, race the mouse, cat and rabbit to reach 60 to finish the race.

Think and Tell-

1. On which numbers did the mouse jump?
2, 4, 6,
2. How many jumps will the rabbit have to make to reach 32?
.....
3. Who among the three jumped on 27?
.....
4. On which numbers did the rabbit jump?
4, 8, 12,
5. How many more jumps did the cat take than the rabbit to finish the race?

The numbers on which the mouse jumped are multiples of 2. Similarly, the cat jumped on numbers which were multiples of 3.

Can you tell on which multiple of the number the rabbit jumped over?

Come let's play the game-

Make your friends sit in a circle and ask one of them to say 1, the next sitting in the second place to say 2 and similarly the children sitting next to, it will continue the counting. The children who get the numbers that come in the multiplication table of 5 should not say the numbers but say 'Jai Bharat'. Take the game forward in this manner.



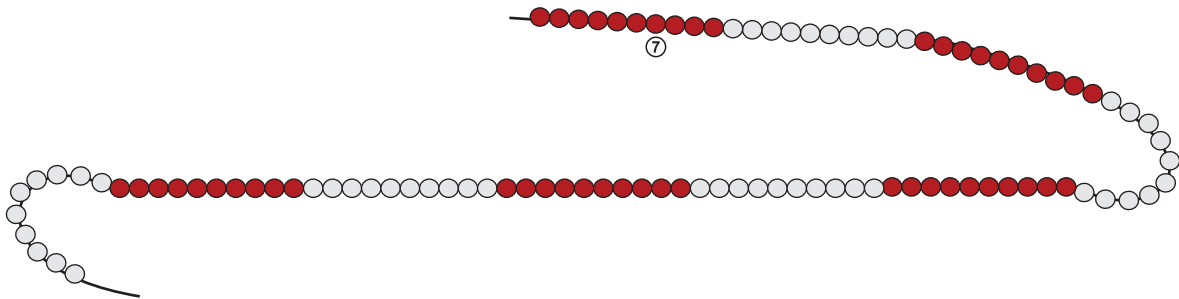


On which numbers did you say 'Jai Bharat', write it down-

The numbers on whose place 'Jai Bharat' was said, are the multiples of

.....

Write the multiples of 7 between 1 to 100 on the beads lace—



Gues the puzzle -

1. I am a multiple of 8. I fall between 60 and 70
2. I am a two-digit multiple of 7. When you write me, the digit 3 comes in the unit place
3. I am a multiple of 6. If my digits are interchanged then I will become another multiple of 6

You also try it-

Write counting numbers up to 100 in your exercise book.

Now, starting from 1, make a triangular shape on the numbers coming at the intervals of 5-5 and make a square shape on the numbers coming at the intervals of 6-6, and find the multiples of 5 and 6.

You can also try to find the multiples of different numbers, with the help of Motimala 'Jai Bharat' game and number chart.

Mouse jump = 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 60

Cat jump = 3, 6, 9, 12, 15, 18, 21, 24, 27, 60

The numbers on which both the mouse and the cat jumped = 6, 12, 18,

.....





On which numbers, after 18 will both the mouse and the cat jump? Write.

The numbers over which both the mouse and the cat jumped are called common multiples of 2 and 3. These are called common or shared multiples.

Make numbers and write it in the correct place -

Monu, Munni, Raju, Dholu, Bholu have participated in this game. Number cards from 1 to 9 are stacked in front of them. The rule of the game is that each player will pick only 2 cards at a time from these cards and make a number from these cards. The numbers formed by stacking them back and forth will be written in the round circles below.



Munni : Look Monu, I have picked up 9 and 6. The numbers formed by these are 69 and 96.

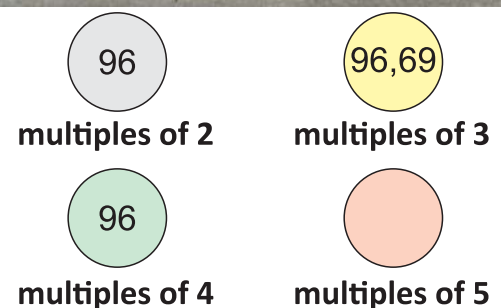
Raju : Okay Munni, but in which circles will you write these numbers?

Munni : I have written it like this Raju.

Raju : But why have you written 69 within the circle of 3?

Munni : Look Raju, first I divided 69 by 2, 3, 4 and 5.

$\begin{array}{r} 2 \overline{) 69} \quad (34 \\ -6 \\ \hline 09 \\ -8 \\ \hline 1 \end{array}$	$\begin{array}{r} 3 \overline{) 69} \quad (23 \\ -6 \\ \hline 09 \\ -9 \\ \hline 0 \end{array}$	$\begin{array}{r} 4 \overline{) 69} \quad (17 \\ -4 \\ \hline 29 \\ -28 \\ \hline 1 \end{array}$	$\begin{array}{r} 5 \overline{) 69} \quad (13 \\ -5 \\ \hline 19 \\ -15 \\ \hline 4 \end{array}$
---	---	--	--





Here, 69 is going to be completely divided only by 3 and in the remaining numbers, a remainder is left. Therefore 69 will be a multiple of 3 only.

Can you tell why Munni has written 96 within the circle of 2, 3 and 4?

You can also try playing this game with your friends and find out which number will come in which circle.

Find out -

1. Just like the cat and the rabbit repeatedly jumped over the numbers, you also jump over the number 3 and 4 and write the multiples.
2. Write the smallest common multiple of 4 and 5.
3. Find the common multiples of 2, 3 and 4 in numbers up to 60.
4. Which numbers will be the multiples of 40?
5. Select and write down the multiples of 2, 3 and 5 from the numbers 8, 24, 15, 21, 18, 33, 23, 17, 168, 39, 500.

Multiples of 2 =

Multiples of 3 =

Multiples of 5 =

6. Understand the given series and write the multiple numbers that come next -

16, 32, 48, 64,,,,,

Think and answer -

1. What will be the largest 2-digit multiple of the number 2?
2. Will 19 be a multiple of any number?
3. Write the first five multiples of the number 5.



Equal division-

The third game kept was related to distributing laddoos equally. Sunil and Suman participated in it. The rule of the game was that the one who gives the maximum number of ways to distribute the laddoos equally will be the winner of this game. Like-



Sunil : Look, I have distributed 12 laddoos equally in groups of 2-2, 3-3 and 4-4. I have won this game.



If we divide 12 laddoos into groups of 2-2 each, then the total number of groups will be 6



If we divide 12 laddoos into groups of 3-3 each, then the total number of groups will be 4



If 12 laddoos are divided in groups of 4-4 each, then the total number of groups will be 3

Suman : Oh no Sunil, you have not suggested all the methods of dividing them equally, so you have not won yet.

There are also other ways to divide them equally, see-



If we divide 12 laddoos into groups of 6-6 each, then the total number of groups will be 2



If we distribute 12 laddoos to 1-1 each person, then 12 people will get them

And if we give all the laddoos to one person then a group formed will be 1.

If instead of 12 laddoos there were 11, 15 and 24 laddoos, how many



groups of equal laddoos would be formed? Write in the table given below-

Total number of laddoos	Number of groups of laddoos made by equal distribution
12	1, 2, 3, 4, 6, 12
11	
15	
18	
24	

Come, let us arrange these groups of laddoos and the number of laddoos kept in these groups, in the multiplication chart given below -

x	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1												12		
2						12								
3				12										
4			12											
5														
6		12												
7														
8														
9														
10														
11														
12	12													
13														
14														





i.e. $1 \times 12 = 12$ $12 \times 1 = 12$
 $2 \times 6 = 12$ $6 \times 2 = 12$
 $3 \times 4 = 12$ $4 \times 3 = 12$

Here $2 \times 6 = 12$ means that 12 is a multiple of 2 and 6. 12 is exactly divisible by 2 and 6, so 2 and 6 are factors of 12.

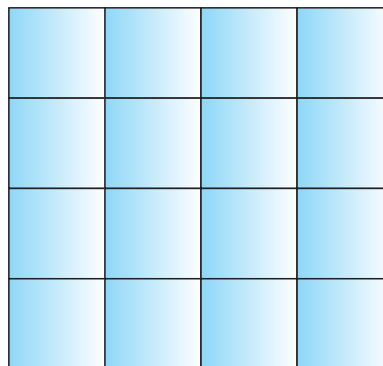
Similarly, 12 is also completely divisible by 1, 3, 4 and 12.

Can you tell more factors of 12? Write them down

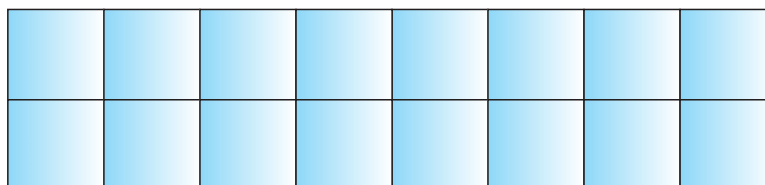
The numbers which are exactly divisible by 12 are called factors of 12.

Stack the tiles-

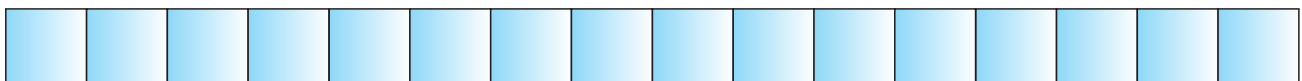
Devanshu has 16 tiles. He arranges them in groups of 4, 8, 16 as shown below -



4×4



8×2



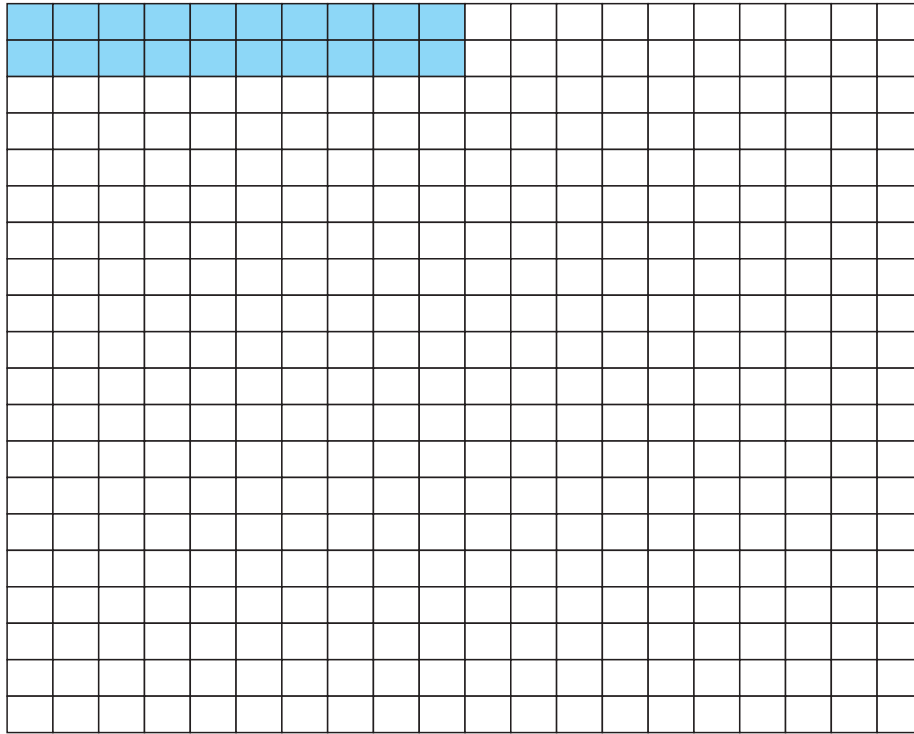
16×1

Write the factors of 16 by looking at the pattern of the arranged tiles





Create maximum number of rectangular tiles possible by colouring 20-20 squares in the given grid-



Are the length and width formed of the rectangular tiles, the factors of the number 20? Think and write the factors of 20—

Factors of 20 =

Practice Work

1. Write all the factors of the following numbers-
 - (i) 25
 - (ii) 36
 - (iii) 45
 - (iv) 22
2. Write the first three common multiples of the given numbers-
 - (i) 8, 12
 - (ii) 6, 9
 - (ii) 10, 15
 - (iv) 12, 18





3. Write the multiples-
 - (i) Multiples of 5 which are less than 60.
 - (ii) Multiples of 8 which are greater than 50 and less than 100.
4. Write all the common multiples of 6 and 8 which are less than 100.
5. Piyush and Amit are running around a field. Piyush completes one round in 5 minutes and Amit in 6 minutes. After how much time will both of them reach the same place after starting running together?
6. There are 15, 16 and 18 laddoos kept in three different utensils respectively. In which utensil the laddoos can be distributed equally in maximum number of ways?
7. Find the smallest common multiple of the numbers 3, 5 and 15.
8. Write the common multiples of numbers 60 and 120 which are less than 600.
9. Find the smallest common multiple of the numbers 20, 40 and 60
10. Find the smallest common multiple of the numbers 10, 15 and 20.



Lesson - 18

The Ink Dripped



When Raju was doing his homework in his copy, ink dripped on the copy while writing.

Let's identify the numbers hidden by the ink drips.

$$\begin{array}{r} 3 \quad 1 \quad 6 \\ + 2 \quad 5 \quad \text{Ink} \\ \hline 5 \quad \text{Ink} \quad 4 \end{array}$$



Here, the sum of the unit digits is 4. 6 is already greater than 4. So, under the ink blot, a single digit number from 0, 1, 2, 3, up to 9, by putting only 8, we can write 4 of 14 and the tens will go as a carry to the next column (tens).



You are saying right, the carry of 1 from 14, added to the tens digit gives $1 + 1 = 2$ and if we add 5 to 2, we get the number 7 under the ink blot.

Let's find out-

Due to dripping of ink on the questions, some digits are not visible. Let's find out those digits.

(i)

$$\begin{array}{r} 8 \quad 1 \quad 5 \quad 4 \\ - 4 \quad 6 \quad \text{Ink} \quad 9 \\ \hline \text{Ink} \quad 5 \quad 0 \quad 5 \end{array}$$

(ii)

$$\begin{array}{r} 1 \quad \text{Ink} \quad 1 \\ 4 \overline{) 486} \\ \underline{4} \\ 0 \quad \text{Ink} \\ \underline{- 8} \\ 0 \quad 6 \\ \underline{- 4} \\ 2 \end{array}$$

(iii)

$$\begin{array}{r} 7 \quad 8 \quad 5 \quad 9 \\ \times 3 \quad 5 \\ \hline 3 \quad 9 \quad \text{Ink} \quad 9 \quad 5 \\ 2 \quad \text{Ink} \quad 5 \quad 7 \quad 7 \quad \times \\ \hline 2 \quad \text{Ink} \quad 5 \quad 0 \quad \text{Ink} \quad 5 \end{array}$$

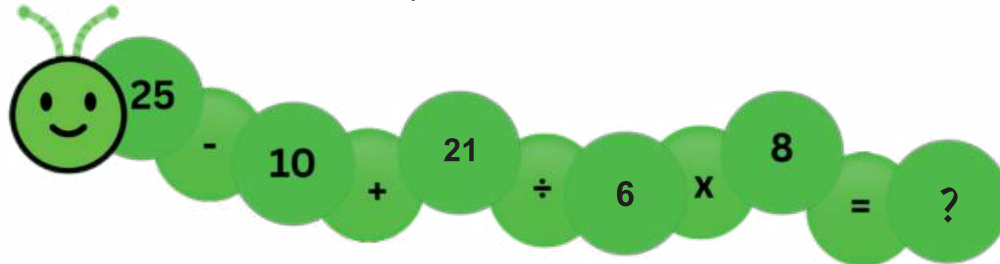
(iv)

$$\begin{array}{r} 7 \quad 3 \quad 5 \quad 4 \\ + 6 \quad \text{Ink} \quad 4 \quad 9 \\ \hline 1 \quad \text{Ink} \quad 9 \quad 0 \quad \text{Ink} \end{array}$$



Let's try to solve some fun puzzles -

1. Counting from the mouth of the caterpillar, reach to its tail find out which number will come in place of “?” ?



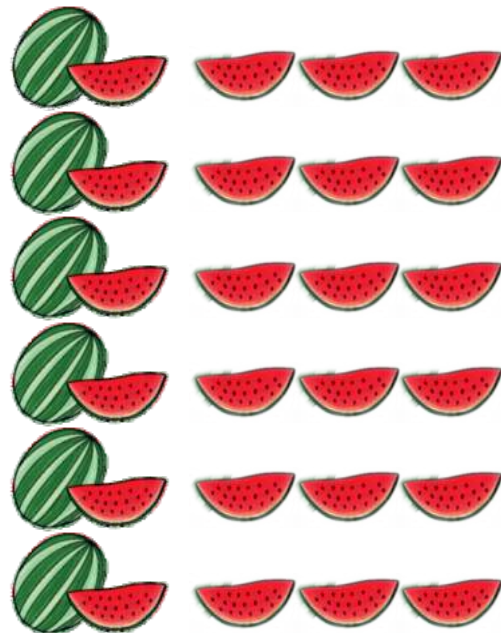
2. Fill in the blank boxes -

40	x		=	920
				x
				12
				=
736	x	15	=	

3. **Come let's distribute watermelons-**

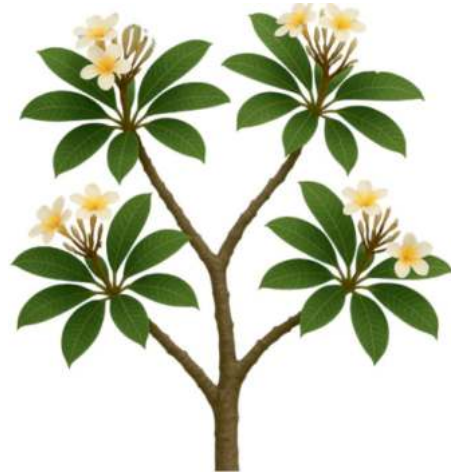
Brought six watermelons
after selecting,
Each watermelon was cut into four
slices. Every student got two pieces
each,
How many students were there
in the class?

Answer –



4. **Tiny-tiny flowers-**

Four branches of a tree,
Two-Two flowers on each branch,
Small-small colourful,
flowers were swinging.
Three trees in the garden,
there is no mistake at all,
How many tiny-tiny flowers
were blooming in the garden.

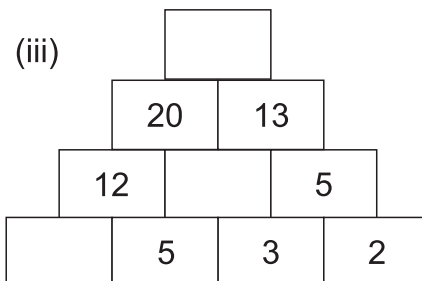
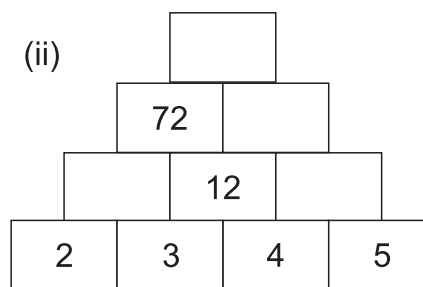
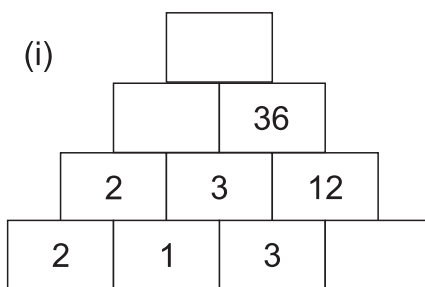


Answer –

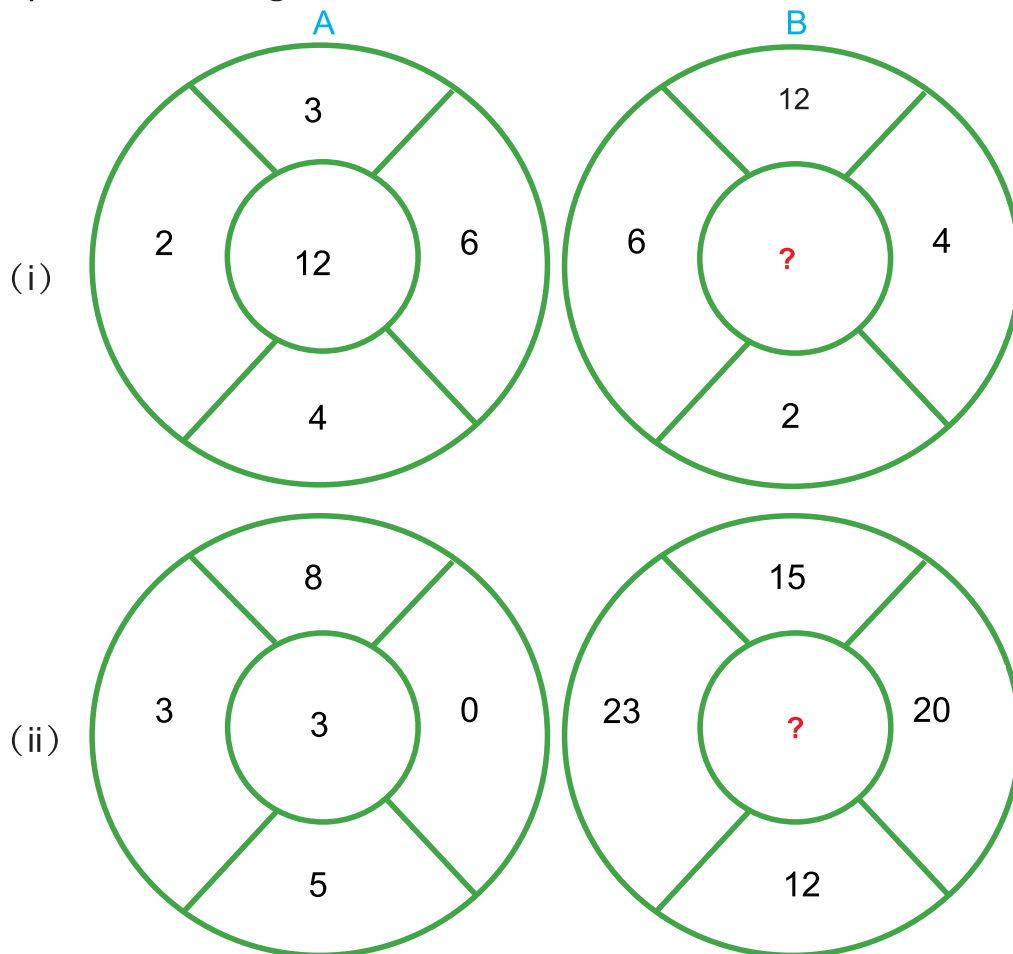
5. Fill in the correct mathematical operation (+, -, ×, ÷) in the blank boxes-

458	+	0	=	458
385		7	=	55
8923		562	=	8361
652		45	=	22340

6. Fill in the correct number in the blank boxes-



7. Understand the operation given in figure A and fill the correct number in place of ? in figure B-



Magic crossword puzzle-

8. Fill numbers in the boxes in such a way that the sum of every horizontal, vertical and diagonal line becomes the following number-

(i) 18

		7
10		
		9

(ii) 33

	13	
10		14

9. Price of Gourd-

Gourd seller brought gourds, one less in hundred,
All gourds sold at rate, nine for two rupees.
How much money did she get, the whole day,
calculate and tell.

Solution-

Total gourds in the basket of the gourd seller = 99

Now 99 gourds will be divided into groups of 9-9 each $(99)/(9) = 11$

Now a total of 11 groups will be formed-

Price of a bunch of 9 gourds = Rs. 2.

So, price of 11 bunches is $\text{Rs. } 2 \times 11 = \text{Rs } 22.$

Total cost of gourd = Rs. 22.

10. Guess and find out-

- (i) Use addition operation of 2 three times to get the sum of 24.
- (ii) Use 4 four times to get 28 by applying any 3 operations (+, -, $\times$, $\div$).
- (iii) I am a 2-digit number and a multiple of 6. When I am reversed, I become a single digit odd number. Tell who am I?

11. Add me to 5, you will get only 5,
subtract me from 5, you will still get 5 only,
if you multiply me by 5 then you will get no remainder,
I am the hero of mathematics,
quickly recognize who I am..?

12. I thought of a number, added 10 to it,
now subtracted 2 from it, still got 10,
can you just tell me the number I had thought of...

13. If A = + (addition), B = - (subtraction), then what will be the value of 6A4B3?

14. Think and answer if-

$$\begin{aligned}
 \text{Yellow Circle} + \text{Yellow Circle} &= 10 \\
 \text{Yellow Circle} \times \text{Blue Square} + \text{Blue Square} &= 18 \\
 \text{Yellow Circle} \times \text{Blue Square} - \text{Red Triangle} \times \text{Yellow Circle} &= \text{Yellow Circle} \\
 \text{Red Triangle} &= ?
 \end{aligned}$$

15. Solve the puzzle by filling the correct number in the blank space given in the square-

8	+	2	=	
+		-		+
6			=	4
=		=		=
	+	0	=	14

16. Some number puzzles made of match sticks are given. You change the position of one stick in such a way that the puzzle becomes correct.

(i)

Answer

(ii)

(iii)

(iv)

Practice Work

1. Fill in the correct number in the box -

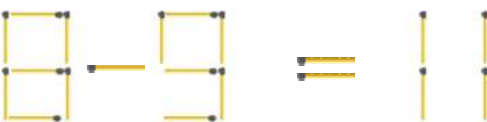
$$\begin{array}{r} \text{(i)} \quad 5 \quad 2 \quad 1 \quad \square \\ + \quad \square \quad 5 \quad 9 \quad 2 \\ \hline 9 \quad 8 \quad \square \quad 6 \end{array}$$

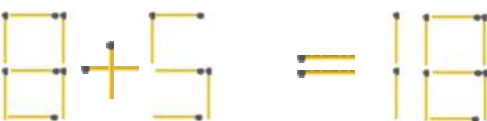
$$\begin{array}{r} \text{(ii)} \quad 9 \quad \square \quad 5 \quad 6 \\ + \quad \square \quad 8 \quad \square \quad 7 \\ \hline 1 \quad 0 \quad 9 \quad \square \end{array}$$

$$\begin{array}{r} \text{(iii)} \quad 2 \quad 1 \quad 4 \quad 0 \\ \quad \quad \quad \times \quad 5 \quad 2 \\ \hline 4 \quad \square \quad 8 \quad \square \\ 1 \quad 0 \quad \square \quad 0 \quad \square \quad \times \\ \hline 1 \quad \square \quad \square \quad \square \quad 8 \quad 0 \end{array}$$

$$\begin{array}{r} \text{(iv)} \quad 1 \quad \square \\ 12 \overline{) 1 \quad 4 \quad 4} \\ \underline{1 \quad 2} \\ \square \quad \square \quad 4 \\ \underline{- 2 \quad 4} \\ \square \quad 0 \end{array}$$

2. Balance the equation by removing one match stick and placing it at some other place-

(i) 

(ii) 

(iii) 

(iv) 

3. Write one six times in such a way that when added you get 123.



4. Solve the crossword puzzle-



	+	15	=	
-		-		-
38	+		=	42
=		=		=
23			=	34

	+		=	36
÷		+		-
2	+		=	
=		=		=
4			=	33

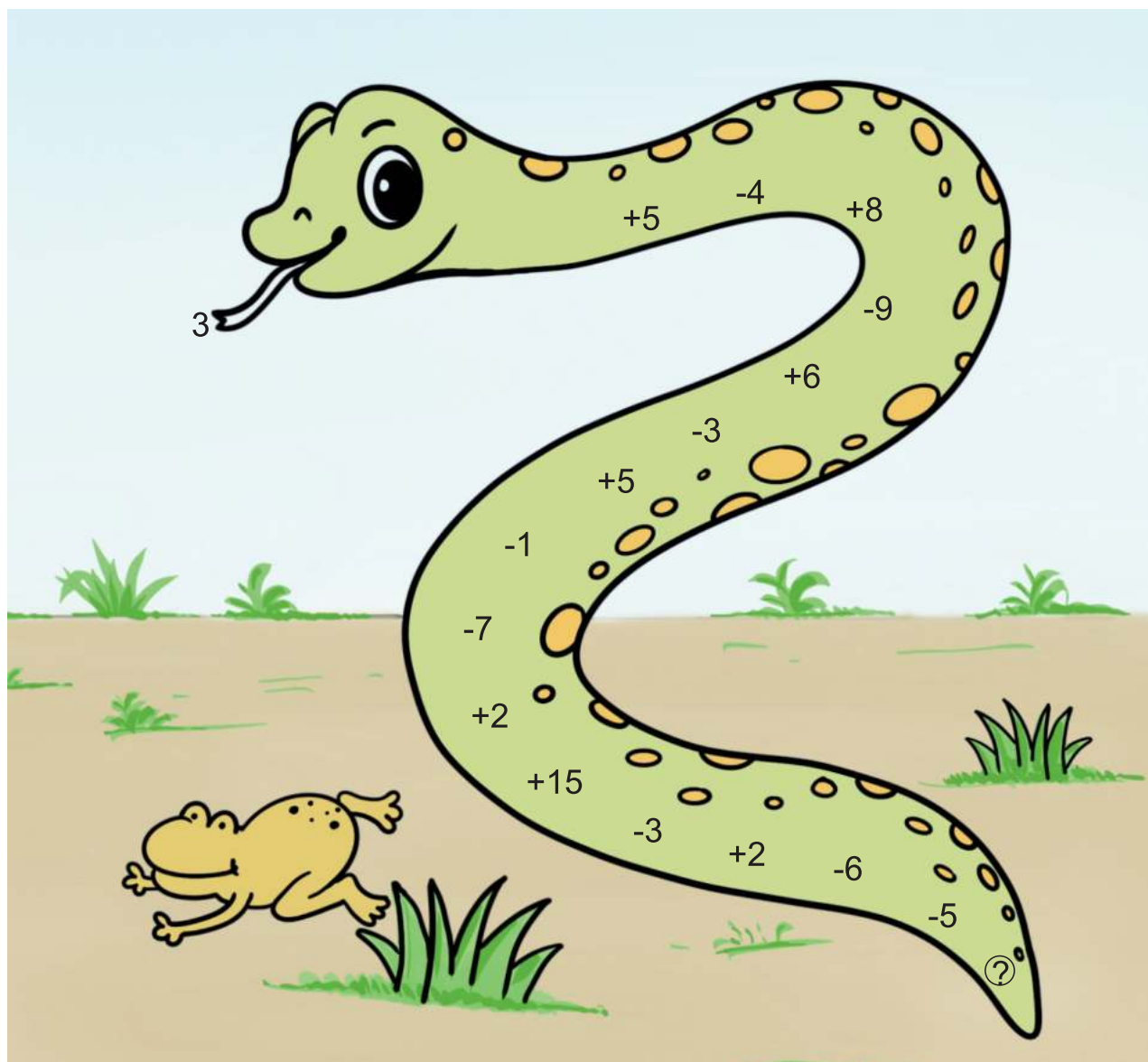


20	+	49	=	
+		-		+
21	-		=	3
=		=		=
	+	31	=	

49	-	5	=	
-		+		-
24	+	7	=	31
=		=		=
	-	12	=	



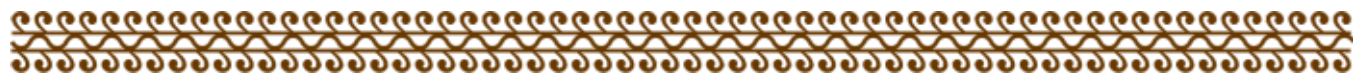
5. Write the missing number on the tail of the snake-



We Learnt and Understood - IV



1. If the length of a rectangle is 6 cm and width is 4 cm, then what will be its perimeter in cm?
2. The side of a square is 5 cm. What will be its perimeter and area?
3. Kashvi used 18 cm of tape to decorate a card and still needs 6 cm of tape. Tell how much total cm tape will be required?
4. The length of a picture is 7 cm and width is 3 cm. What will be its square cm area?
5. A square has 4 sides and all are equal. If each side is 6 cm, then what will be the area of the square?
6. The areas of two rectangles are equal. The area of one is 24 square cm. Will their perimeters also be equal? Answer yes or no and give reasons.
7. If the length of a cloth is 10 cm and width 4 cm, then how many cm of thread is required to hem a lace around it?
8. The area of a square garden is 49 square meters. What will be the one side of that garden?
9. Which of the following objects is cylindrical in shape?
(a) platter (b) glass (c) plate (d) paper
10. What are the three main dimensions of a cuboid?
11. How many dimensions are there in a flat paper? Which extra dimensions gets added when a box is made from it?
12. Which of the following figures will not return to its original state in just one rotation?
(a) square (b) equilateral triangle (c) sphere (d) pentagon



13. If an object when rotates, returns to its initial position after three times, then how many sides are there in that shape ?
14. Which of the following is a 3D figure?
(a) leaf (b) door (c) football (d) paper
15. All four sides of a square are equal. If it is rotated, in how many times will it return to its original position?
16. Find any two objects in your school bag that are three dimensional and write their names.
17. A rat completed the race by taking two-two jumps each. If the path is 30 meters long, then how many jumps would it have taken?
18. What are the common multiples of 3 and 4 between 1 to 60? Write.
19. How many ways can be there to divide 24 laddus equally? How many groups will be formed each time? Write.
20. What will be the smallest multiple of 15, which is also a multiple of both 5 and 3?
21. Which of the numbers given below are multiples of 2?
8, 17, 24, 39, 44
22. A child jumps 6-6 times each. Where will he reach in completing a distance of 60 meters? (Write the multiples of 6)
23. If a tile is 4 feet long and 1 foot wide, how many tiles will be required to completely cover a 20 square feet ground?
24. All the factors of a number are the numbers which are exactly divisible by it. Write the factors of 18.
25. Write the numbers in expanded form-
(i) 12430 (ii) 50891 (iii) 37004 (iv) 64950





26. Find out all the place values of digit 4 in numbers-

- (i) 42613 (ii) 58440 (iii) 94082
(iv) 13454 (v) 74129 (vi) 40967

27. Write the numbers in ascending order-

- (i) 56321, 53261, 52316, 51326
(ii) 74120, 72410, 71402, 89503
(iii) 85930, 80593, 83059, 89503
(iv) 91042, 90124, 90412

28. Write the numbers in descending order-

- (i) 45231, 43512, 54321, 52413
(ii) 81023, 80312, 82031, 80213
(iii) 96540, 95640, 94650, 96405
(iv) 7632, 7362, 7236, 7623

29. Put the correct sign $>$, $<$, $=$ between the numbers given below-

- (i) 45210 45310 (ii) 99990 99900
(iii) 88888 88888 (iv) 87654 87645
(v) 73020 72030 (vi) 32145 32154
(vii) 14523 15423 (viii) 90001 90010
(ix) 21000 20100

30. Fill in the blank boxes-

490	$\div$		=	70
				+
				230
				=
.....	$\times$	15	=	



Tables

$1 \times 1 = 1$	$2 \times 1 = 2$	$3 \times 1 = 3$	$4 \times 1 = 4$	$5 \times 1 = 5$
$1 \times 2 = 2$	$2 \times 2 = 4$	$3 \times 2 = 6$	$4 \times 2 = 8$	$5 \times 2 = 10$
$1 \times 3 = 3$	$2 \times 3 = 6$	$3 \times 3 = 9$	$4 \times 3 = 12$	$5 \times 3 = 15$
$1 \times 4 = 4$	$2 \times 4 = 8$	$3 \times 4 = 12$	$4 \times 4 = 16$	$5 \times 4 = 20$
$1 \times 5 = 5$	$2 \times 5 = 10$	$3 \times 5 = 15$	$4 \times 5 = 20$	$5 \times 5 = 25$
$1 \times 6 = 6$	$2 \times 6 = 12$	$3 \times 6 = 18$	$4 \times 6 = 24$	$5 \times 6 = 30$
$1 \times 7 = 7$	$2 \times 7 = 14$	$3 \times 7 = 21$	$4 \times 7 = 28$	$5 \times 7 = 35$
$1 \times 8 = 8$	$2 \times 8 = 16$	$3 \times 8 = 24$	$4 \times 8 = 32$	$5 \times 8 = 40$
$1 \times 9 = 9$	$2 \times 9 = 18$	$3 \times 9 = 27$	$4 \times 9 = 36$	$5 \times 9 = 45$
$1 \times 10 = 10$	$2 \times 10 = 20$	$3 \times 10 = 30$	$4 \times 10 = 40$	$5 \times 10 = 50$

$6 \times 1 = 6$	$7 \times 1 = 7$	$8 \times 1 = 8$	$9 \times 1 = 9$	$10 \times 1 = 10$
$6 \times 2 = 12$	$7 \times 2 = 14$	$8 \times 2 = 16$	$9 \times 2 = 18$	$10 \times 2 = 20$
$6 \times 3 = 18$	$7 \times 3 = 21$	$8 \times 3 = 24$	$9 \times 3 = 27$	$10 \times 3 = 30$
$6 \times 4 = 24$	$7 \times 4 = 28$	$8 \times 4 = 32$	$9 \times 4 = 36$	$10 \times 4 = 40$
$6 \times 5 = 30$	$7 \times 5 = 35$	$8 \times 5 = 40$	$9 \times 5 = 45$	$10 \times 5 = 50$
$6 \times 6 = 36$	$7 \times 6 = 42$	$8 \times 6 = 48$	$9 \times 6 = 54$	$10 \times 6 = 60$
$6 \times 7 = 42$	$7 \times 7 = 49$	$8 \times 7 = 56$	$9 \times 7 = 63$	$10 \times 7 = 70$
$6 \times 8 = 48$	$7 \times 8 = 56$	$8 \times 8 = 64$	$9 \times 8 = 72$	$10 \times 8 = 80$
$6 \times 9 = 54$	$7 \times 9 = 63$	$8 \times 9 = 72$	$9 \times 9 = 81$	$10 \times 9 = 90$
$6 \times 10 = 60$	$7 \times 10 = 70$	$8 \times 10 = 80$	$9 \times 10 = 90$	$10 \times 10 = 100$



$11 \times 1 = 11$	$12 \times 1 = 12$	$13 \times 1 = 13$	$14 \times 1 = 14$	$15 \times 1 = 15$
$11 \times 2 = 22$	$12 \times 2 = 24$	$13 \times 2 = 26$	$14 \times 2 = 28$	$15 \times 2 = 30$
$11 \times 3 = 33$	$12 \times 3 = 36$	$13 \times 3 = 39$	$14 \times 3 = 42$	$15 \times 3 = 45$
$11 \times 4 = 44$	$12 \times 4 = 48$	$13 \times 4 = 52$	$14 \times 4 = 56$	$15 \times 4 = 60$
$11 \times 5 = 55$	$12 \times 5 = 60$	$13 \times 5 = 65$	$14 \times 5 = 70$	$15 \times 5 = 75$
$11 \times 6 = 66$	$12 \times 6 = 72$	$13 \times 6 = 78$	$14 \times 6 = 84$	$15 \times 6 = 90$
$11 \times 7 = 77$	$12 \times 7 = 84$	$13 \times 7 = 91$	$14 \times 7 = 98$	$15 \times 7 = 105$
$11 \times 8 = 88$	$12 \times 8 = 96$	$13 \times 8 = 104$	$14 \times 8 = 112$	$15 \times 8 = 120$
$11 \times 9 = 99$	$12 \times 9 = 108$	$13 \times 9 = 117$	$14 \times 9 = 126$	$15 \times 9 = 135$
$11 \times 10 = 110$	$12 \times 10 = 120$	$13 \times 10 = 130$	$14 \times 10 = 140$	$15 \times 10 = 150$

$16 \times 1 = 16$	$17 \times 1 = 17$	$18 \times 1 = 18$	$19 \times 1 = 19$	$20 \times 1 = 20$
$16 \times 2 = 32$	$17 \times 2 = 34$	$18 \times 2 = 36$	$19 \times 2 = 38$	$20 \times 2 = 40$
$16 \times 3 = 48$	$17 \times 3 = 51$	$18 \times 3 = 54$	$19 \times 3 = 57$	$20 \times 3 = 60$
$16 \times 4 = 64$	$17 \times 4 = 68$	$18 \times 4 = 72$	$19 \times 4 = 76$	$20 \times 4 = 80$
$16 \times 5 = 80$	$17 \times 5 = 85$	$18 \times 5 = 90$	$19 \times 5 = 95$	$20 \times 5 = 100$
$16 \times 6 = 96$	$17 \times 6 = 102$	$18 \times 6 = 108$	$19 \times 6 = 114$	$20 \times 6 = 120$
$16 \times 7 = 112$	$17 \times 7 = 119$	$18 \times 7 = 126$	$19 \times 7 = 133$	$20 \times 7 = 140$
$16 \times 8 = 128$	$17 \times 8 = 136$	$18 \times 8 = 144$	$19 \times 8 = 152$	$20 \times 8 = 160$
$16 \times 9 = 144$	$17 \times 9 = 153$	$18 \times 9 = 162$	$19 \times 9 = 171$	$20 \times 9 = 180$
$16 \times 10 = 160$	$17 \times 10 = 170$	$18 \times 10 = 180$	$19 \times 10 = 190$	$20 \times 10 = 200$





Creative Activity

(Practice sheet for making diagram)
