MATHEMATICS

CLASS - III

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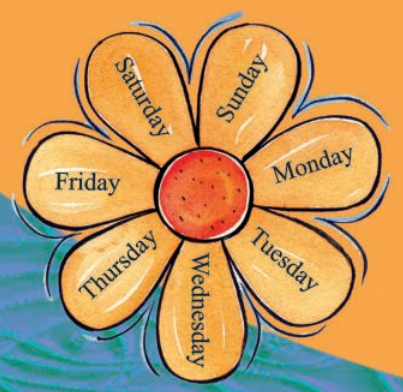

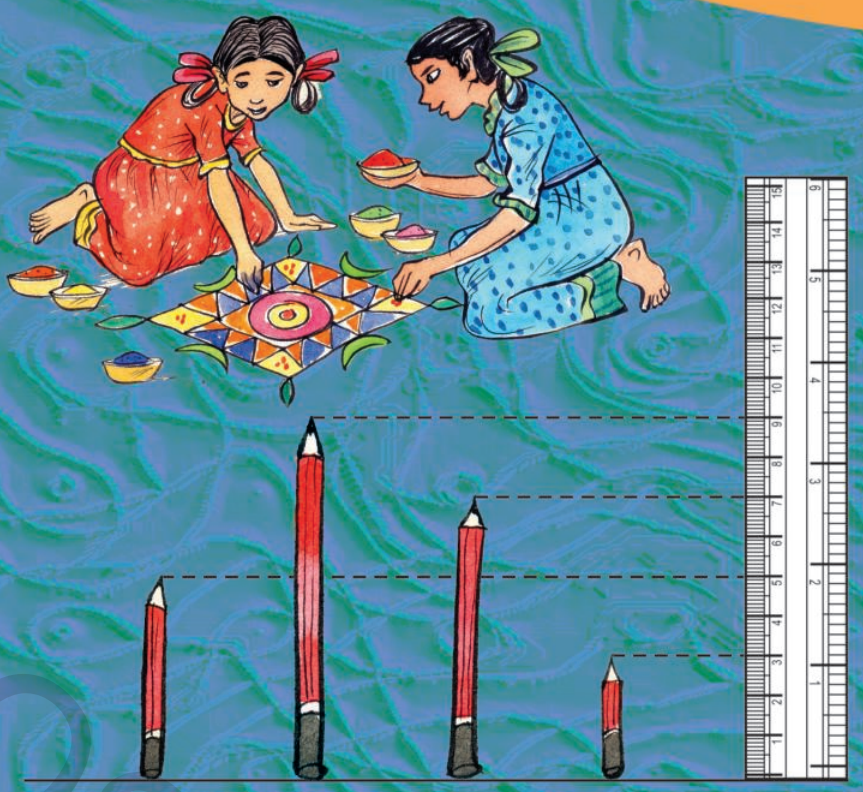

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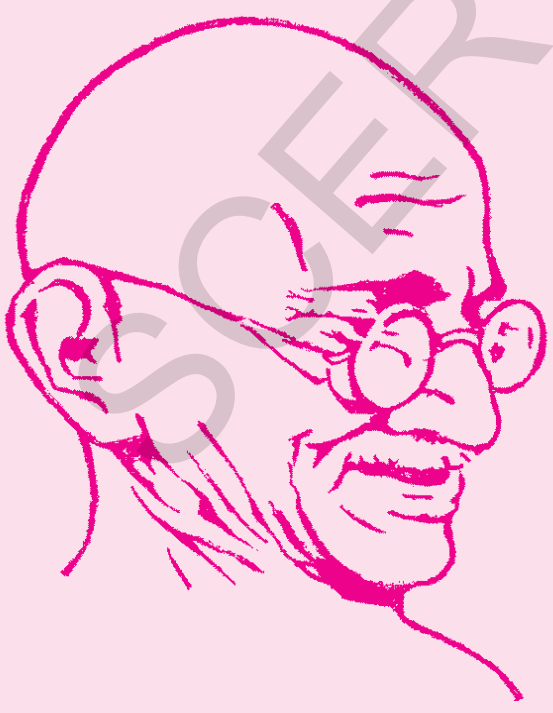

SAVE
EACH DROP OF WATER

LET GROW
EVERY LITTLE PLANT

THEY WILL TAKE
GUARANTEE OUR FUTURE

(Mahathma Gandhi)

MATHEMATICS

CLASS - III

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FORE WORD

Learning mathematics is a joyful activity. Students are enthusiastic in participating the activities which effect their perceptions and personal experiences. They accept any challenge. They have their own style in learning. Therefore they are acquainted with come skills on basic concepts of Mathematics before they come to school. By developing these skills children enjoy learning mathematics at primary stage. A new textbook on mathematics is raised in this occasion. The new textbook continues their natural style of learning and reinforces the standards acquired in the previous classes and enrich the conceptual understanding of the children by way of knowledge construction with the help of various meaningful situations of our day - to – day life. Activities and the exercises in this book help children to understand mathematical concepts and as well as utilize them in their daily life.

This book aims at the syllabus and academic standards focused by the position paper which is based on Right to education act-2009(RTE – 2009) and state curriculum frame work-2011(SCF – 2011). As the changes in syllabus and teaching learning processes are invitable due to the suggestions of position paper,a need has arisen to design and develop a new text book .The situations, exercises and activities given in the textbook are aimed at to develop among children the abilities of problem solving, logical thinking, expressing ideas in mathematical language, representing data in different forms,connectivity between concepts and different contexts . As such, the teaching learning processes should be able to promote children's interactions, critical thinking, creativity and viewing things in different angles to achieve the prescribed standards at this level.

The various chapters included in this textbook will be useful to children not only to understand the concepts but also practice them. As a result students develop interest and passion for learning mathematics.

This book promotes teacher's professionalism and makes teaching of mathematics a pleasant activity and joyful learning for children . This will also become a helping tool in the Continuous Comprehensive Evaluation (CCE).

I wish to profoundly thank the national level experts, University teachers, research scholars,academic experts, NGO's, illustrators, graphic designers,the printers and all those responsible to bring out this text book for their continuous support and encouragement

I hope all the teachers will implement this textbook in a meaningful way in their classroom teaching for the development of academic standards of our children.

B. Seshu kumari

Director,
SCERT, Hyderabad

MATHEMATICS

CLASS - III

OUR NATIONAL ANTHEM

- Rabindranath Tagore

Jana-gana-mana-adhinayaka, jaya he
Bharata-bhagya-vidhata.
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga.
Tava shubha name jage,
Tava shubha asisa mage,
Gahe tava jaya gatha,
Jana-gana-mangala-dayaka jaya he
Bharata-bhagya-vidhata.
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he!

PLEDGE

- Pydimarri Venkata Subba Rao

"India is my country. All Indians are my brothers and sisters.
I love my country, and I am proud of its rich and varied heritage.
I shall always strive to be worthy of it.
I shall give my parents, teachers and all elders respect,
and treat everyone with courtesy. I shall be kind to animals
To my country and my people, I pledge my devotion.
In their well-being and prosperity alone lies my happiness."

1 SHAPES AND SPATIAL UNDERSTANDING

One day a teacher asked her students to draw pictures of chairs in their homes.

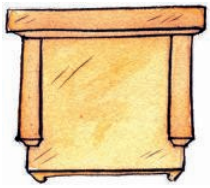
Next day Shalini brought the two pictures that she had drawn.

Rajni looked at one of the pictures and said, "This is not a chair".

Shalini said, "It is a chair."

The teacher asked, "What are you talking about?"

Rajni showed the picture to the teacher.



What do you think? Has Shalini drawn the picture of a chair?

The teacher said, "This is a chair. It is how the chair looks when you look at it from the top."

Pooja and Reena had drawn pictures of chair like this.

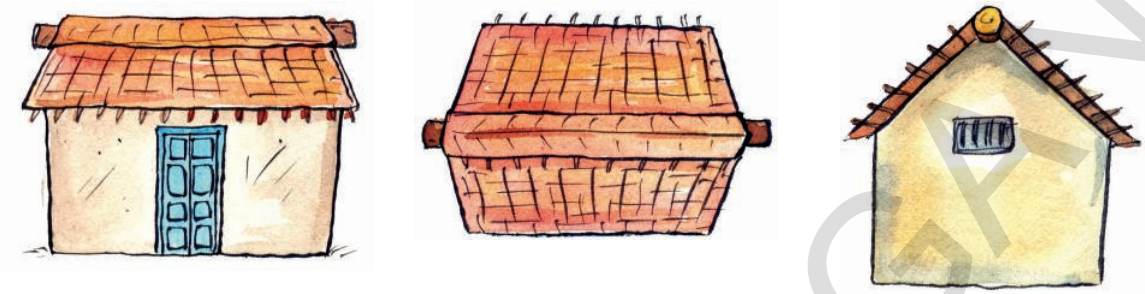
Front view

Side view

Have you looked at a chair from different sides?

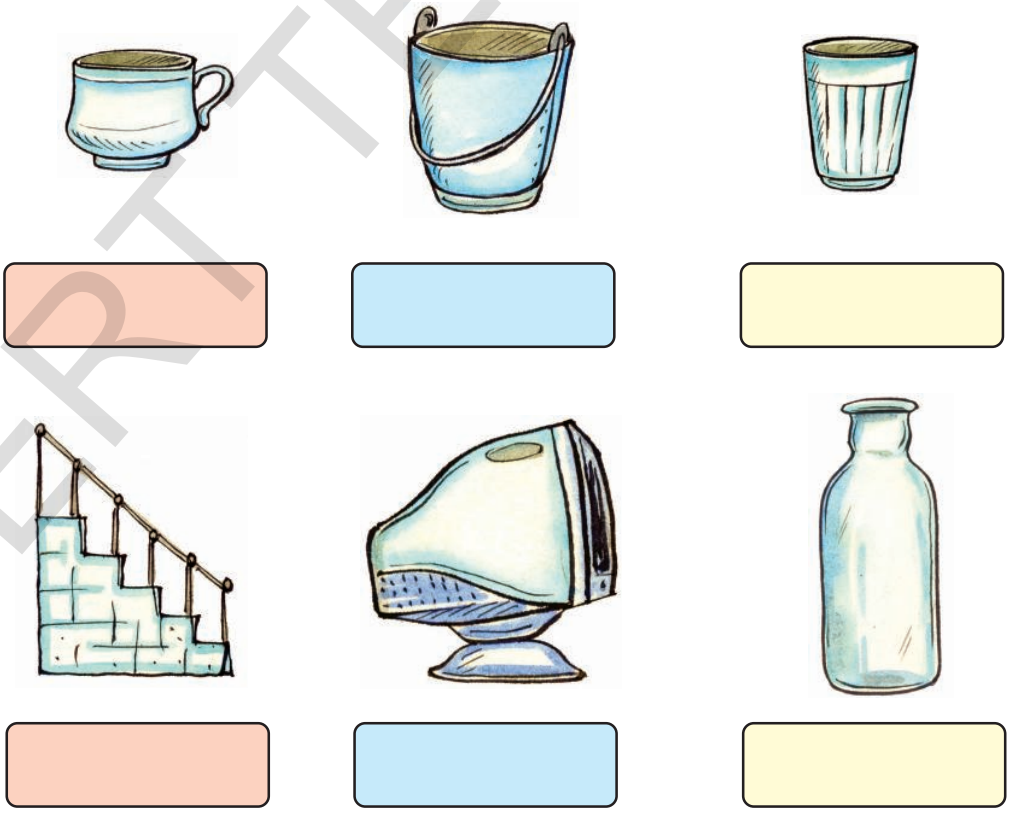
Do they look the same or different?

1. Look at the pictures of a house drawn here. Can you say which is drawn from the top, which is from the front and which is from the side. Write in the boxes given below.



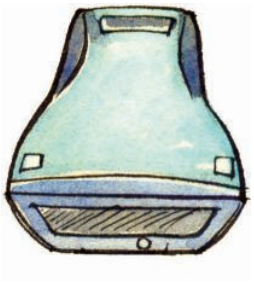
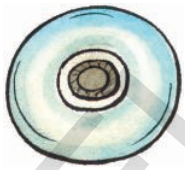
2. Identify these objects.

(i) Some pictures of objects are given here. These pictures show their side view. Write the names of the objects in the boxes given below them.



(ii) Some pictures of objects are given here. These pictures show their top view. Write the names of the objects in the boxes given below them.




(iii) Draw the picture of a table to show how it will look like from the top and the side.

Top view	Side view

Activity-1

(i) Let us trace some objects.

Take a match-box, put it on a paper and draw as shown here. Observe the shapes formed.

(ii) Take a bangle and trace it. Observe the shape formed.

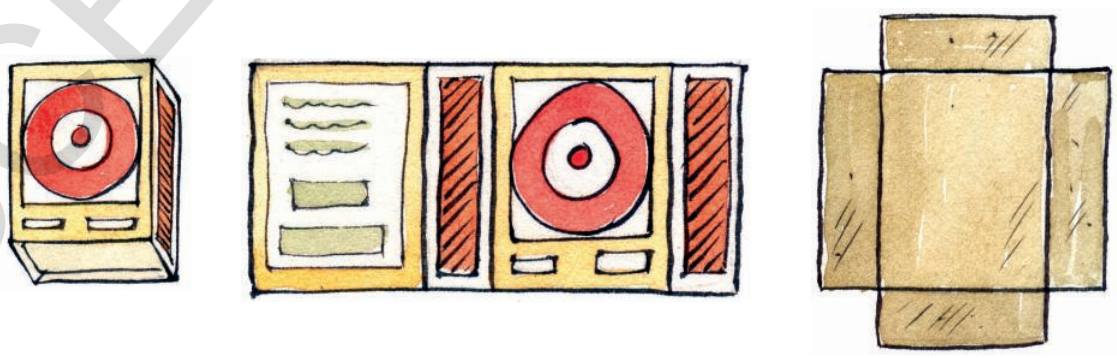
(iii) Trace the following objects on a paper. Identify the shapes and draw in the table.

Object	Shape of the object
	
	
	

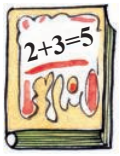
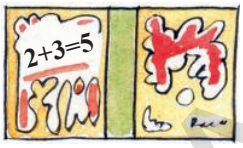
3. Let us see the shapes of some objects.

Take a match-box. Open it as shown in the figure.

See how it looks.



(i) Now see these objects. How will they appear when they are opened up? Tick (✓) the correct answer.

 Book	 ☐	 ☐
 Match-box tray	 ☐	 ☐

(ii) Collect a toothpaste box, a soap wrapper, a chalk box and a biscuit packet wrapper. Open them and draw their shapes.

4. Let us observe the shapes in a Rangoli

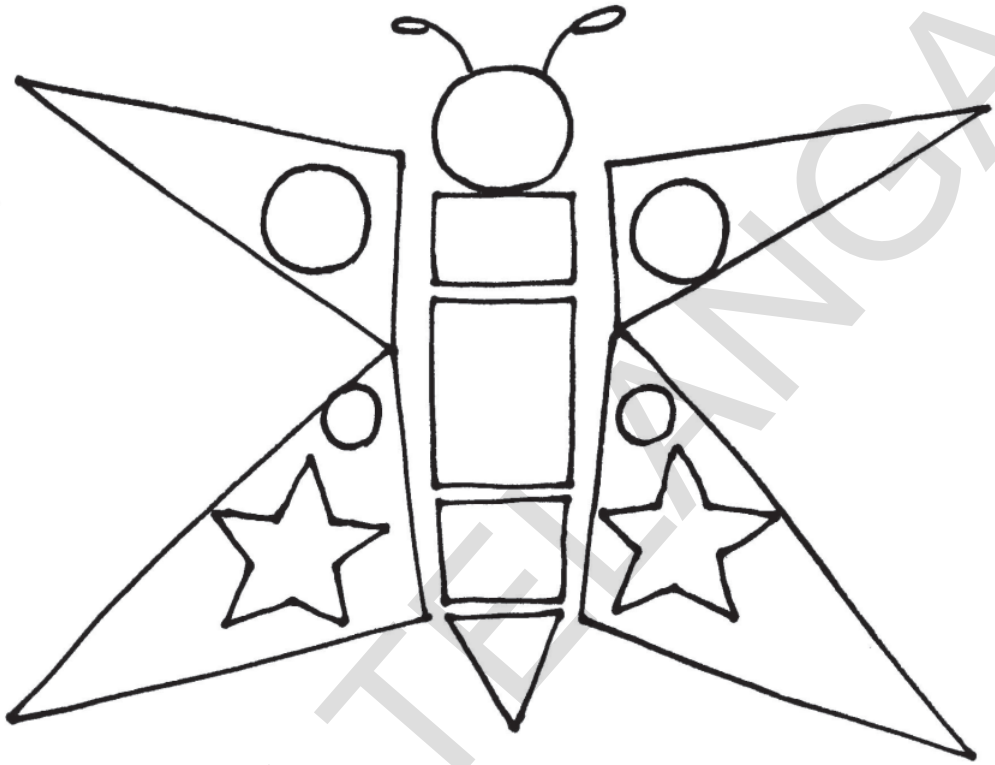
Sita and Gita are very interested in making a rangoli. They make rangolis on the day of a festival. Observe this lovely rangoli.

Identify these shapes ◯, □, △, ▭, ⬡,  in the Rangoli.

(i) Fill the colour according to the given shape.

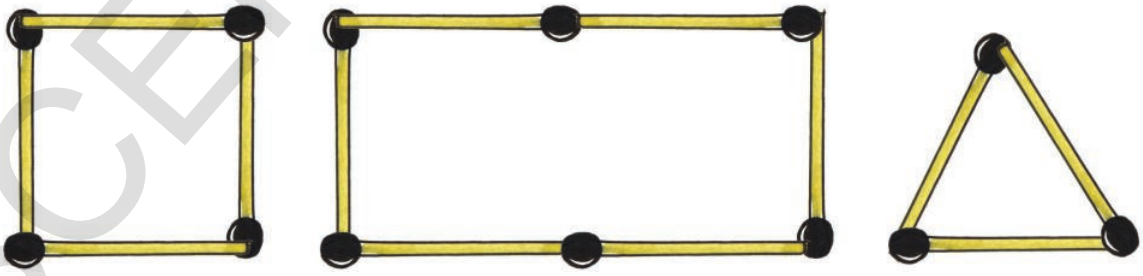
★ Black, ▲ Green, ● Red, ■ Yellow, ▬ Blue

Identify different shapes in the picture and colour as given above.



5. Playing with match-sticks.

Suresh made these shapes using match-sticks.



Using 4 sticks Using 6 sticks Using 3 sticks

(i) Make shapes using match-sticks

(A) Make a  using 8 sticks

(B) Make a  using 8 sticks

(C) Make a  using 5 sticks

(D) Make a  using 12 sticks

(E) Make a  using 12 sticks

(F) Make a  using 12 sticks

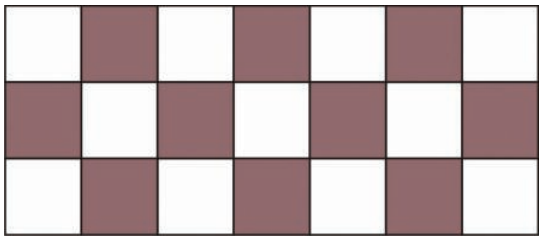
(ii) (A) How many different types of shapes can be formed using 8 sticks? 

(B) How many different types of shapes can be formed using 5 sticks? 

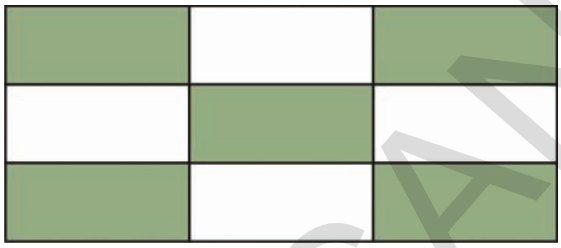
(C) How many different types of shapes can be formed using 12 sticks? 

(D) How many different types of shapes can be formed using 6 sticks? 

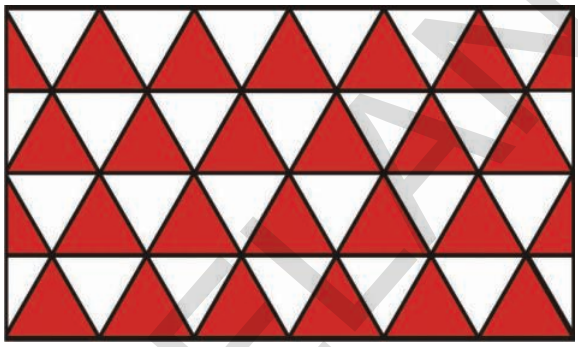
6. See the three types of flooring in different houses. Identify the shapes in it. Draw the shapes in the given blanks.



This floor is formed using _____ shapes.



This floor is formed using _____ shapes.



This floor is formed using _____ shapes.

Activity-2

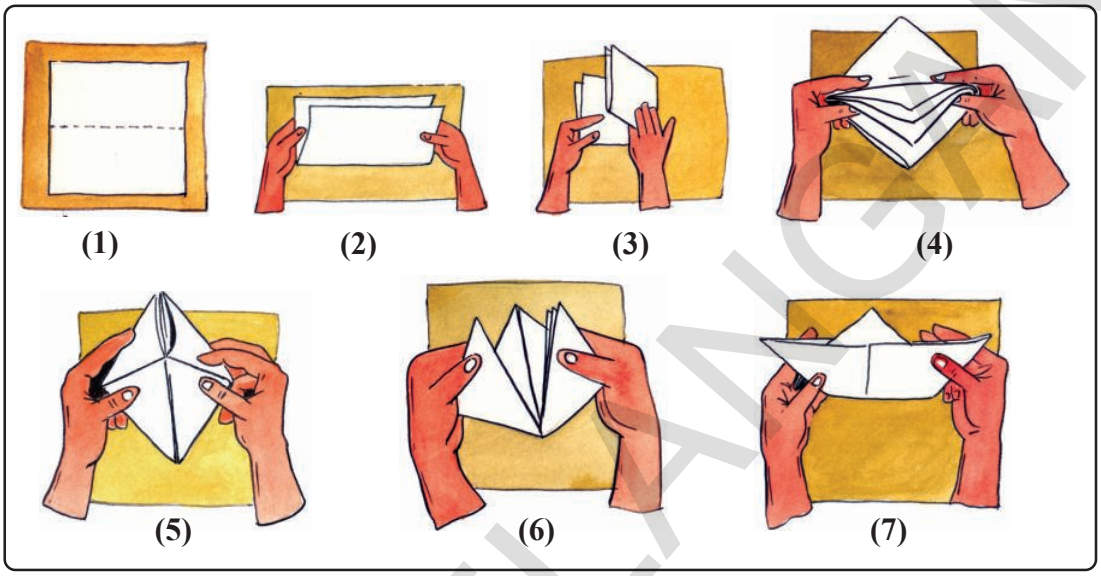
Pooja and her brother started arranging some match-boxes on a paper.

Can they arrange them without leaving any gap?

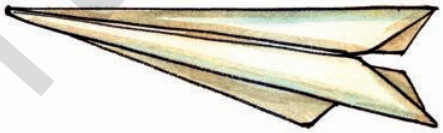
Now they took some bangles and placed them on a white paper. Is it possible to arrange them without any gaps on the paper.

Activity-3

Take a paper. Fold it as shown in the picture and make a boat.



Take a piece of paper and try making a boat yourself. Then, try to make a rocket.



Do This

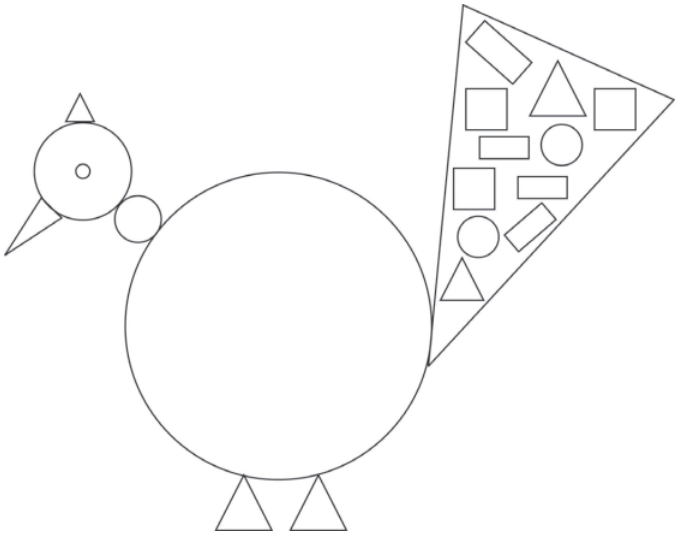
1. Some shapes are given below with different colours. Colour the shapes in the picture with the same colour as shown below.

(A) 

(B) 

(C) 

(D) 



2. Look at the picture of the peacock and answer the following.

(A) How many ▭ are there ? ————

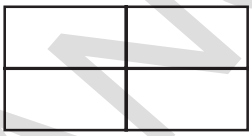
(B) How many ◯ are there ? ————

(C) How many △ are there ? ————

(D) How many □ are there ? ————

3. How many ▭ are there in each picture? Count them and write in the blank.

———



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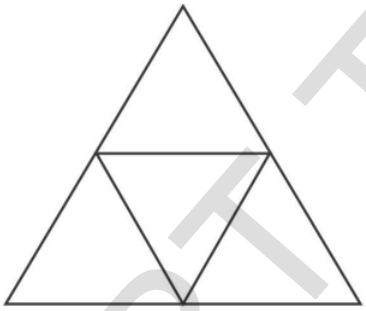
4. How many △ are there in each picture? Count them and write in the blank.



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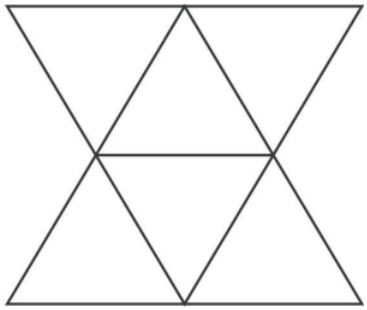

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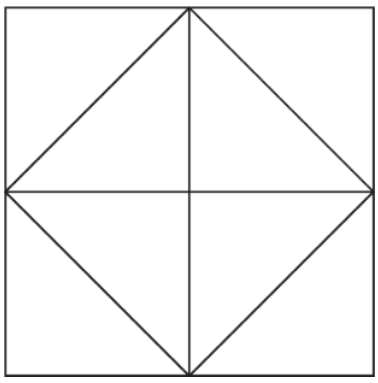
5. Count and write.



(A) How many ▭ are there? ——

(B) How many △ are there? ——

(C) How many □ are there ? ——

2 NUMBERS

Ravi and his friends are playing cricket.

See the following table and answer the following questions:

Player	Runs
Ravi	45
Neelima	24
Geetha	34
Saleem	20
Keshav	20
Mahesh	95
Madhu	84
Rama	17

(A) How many runs did Ravi score?

(B) What is the highest score given in the table?

(C) How many players made runs above 50?

(D) How many players made runs below 50?

(F) How many players scored the least?

(G) How many players scored between 20 and 40?

1. (A) Write any 5, two-digit numbers that can be formed using 6, 8 and 9.

(B) Write the largest number?

(C) Write the smallest number?

(D) Write the above numbers in ascending order (from smallest to biggest).

2. Circle the number nearest to the given number.

Example : 62		**60**	**70**	**80**
(A)	49	20	50	60
(B)	32	30	10	40
(C)	89	80	90	60
(D)	74	60	70	80

3. Write the following numbers in expanded form.

Example : 35 = 30 + 5

(A) 25 =

(B) 49 =

(C) 34 =

(D) 48 =

4. Write the correct number for given expanded form.

Example : 20 + 9 = 29

(A) 50 + 4 =

(B) 30 + 0 =

(C) 20 + 6 =

(D) 60 + 7 =

How many bricks?

Mayuri's father told her to count the bricks in their yard. She started counting ... one, two, three ...

Soon she made a mistake and she had to begin again.

Father : Why did you not count in groups?

Mayuri : What do you mean?

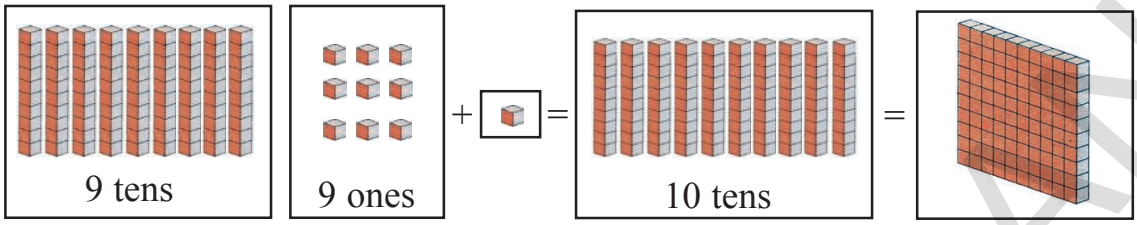
Father : Take 5 at one time and count like 5, 10, 15 .....

Mayuri : Let me take groups of 10.

Mayuri grouped bricks into 10's and started counting .... 10, 20, 30, 40, 50, 60, 70, 80, 90. She said "Papa there are 90 here and 9 more, a total of 99 bricks. If you give me one more brick, then the last column would also contain ten bricks".

Then how many bricks will be there? There would be hundred bricks.

Three-digit numbers



If we add 1 to 99 we get 100.

How many tens are there in 100?

100 = 10 tens

How many ones are there in 100?

100 = 100 ones

99 is the biggest two-digit number.

The first number with 3 digits is 100. This means that 100 is the smallest number with 3 digits.

How much we get, if 1 is added to 100?

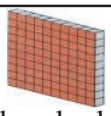
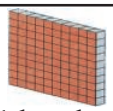
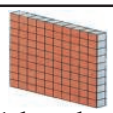
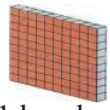
How much we get, if 10 is added to 100?

How much we get, if 100 is added to 100?

Think about these questions as you do the next task.

Numbers after 100

1. Fill the empty boxes according to the pictures.

 hundreds	 tens	ones		
 1 hundred		1 one	100 + 1	101
 1 hundred		2 ones	100 + 2	102
 1 hundred		3 ones	100 + 3	
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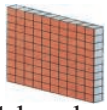
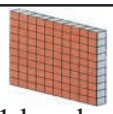
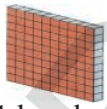
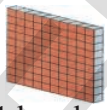
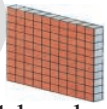
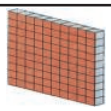
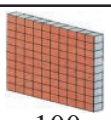
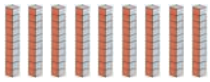
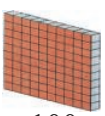
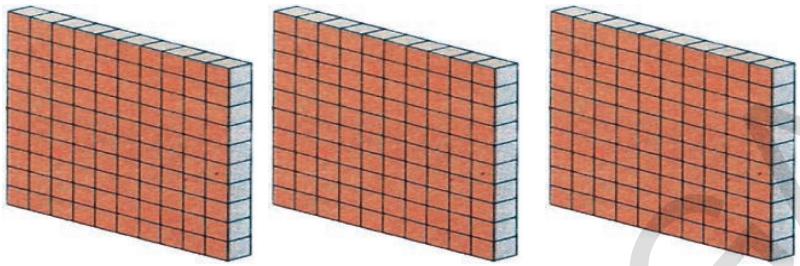
 1 hundred			100 + 5	105
 1 hundred		6 ones	100 + 6	
 1 hundred		7 ones		107
 1 hundred		8 ones		
 1 hundred		9 ones		
 1 hundred	 1 ten		100 + 10	110

2. Fill the empty boxes according to the pictures.

 100	 10		
 100	 10	100 + 10	110
 100	 20	100 + 20	120
 100	 30	100 + 30	
100	40		140
100		100 + 50	
	60	100 + 60	
			170
			180
 100	 90		
 100	 100	100 + 100	200

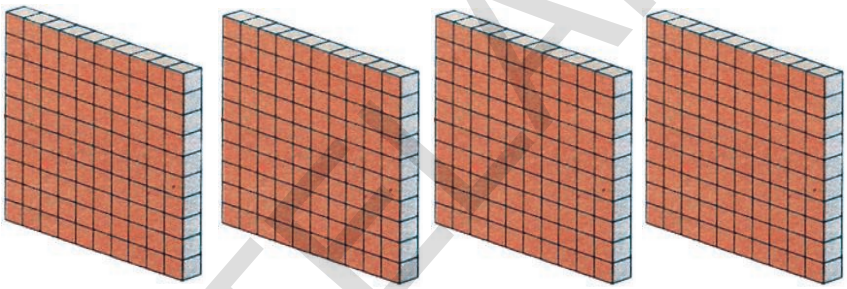
3. Count the hundreds.

Example :



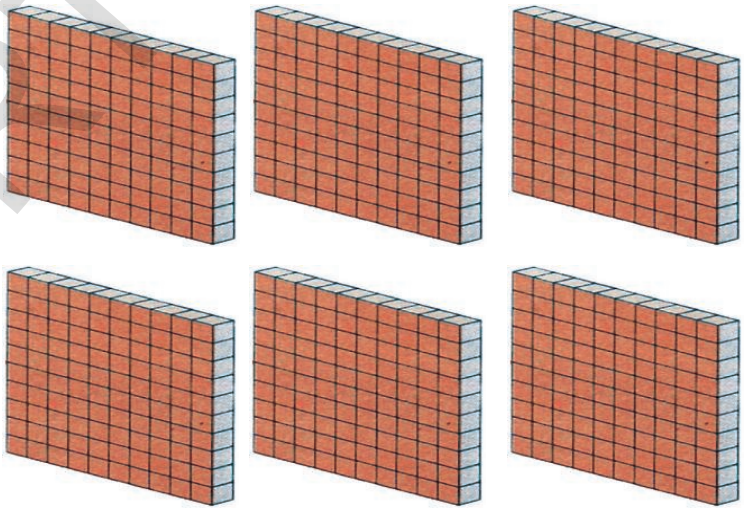
100 + 100 + 100 = 300

(A)



=

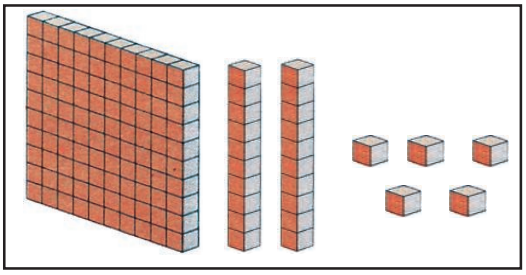
(B)



=

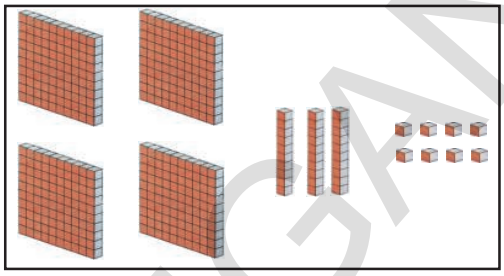
4. Count the hundreds, tens and ones and write the correct number in the boxes below the pictures.

Example :



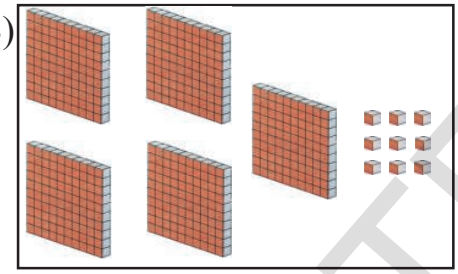
100	10	1	Number
1	2	5	125

(A)



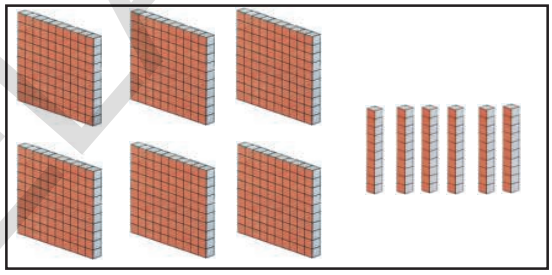
100	10	1	Number

(B)



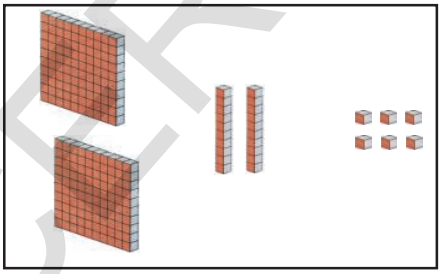
100	10	1	Number

(C)



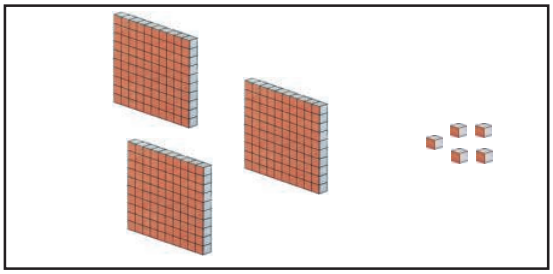
100	10	1	Number

(D)



100	10	1	Number

(E)



100	10	1	Number

5. Identify the one-digit, two-digit and three-digit numbers in the grid given below and write them in the table.

42	315	9	54	165	240
26	8	143	7	289	20
462	34	88	96	15	431
3	73	102	4	66	1

42 is 2 digit number.
4 and 2 are the digits.
So this number is formed by 4 tens and 2 ones.

One digit numbers	Two digit numbers	Three digit numbers

Ravi says that 20 is a one-digit number as it has a zero and zero has no value. Kanta says that 20 is made up of 2 digits 2 and 0. 0 in the ones place means 'no ones'. Do you agree with Ravi or Kanta?

What is the value of zero in 101?

6. Write the correct number in the blank boxes.

91	92	93				97		99	
101	102						108		110
			114						120
		123							
131									
					146				
				155					
161									
				175					
					186				
						197			
201								209	

See the table above and answer the following questions. Write your answer in both words and numbers.

(A) What is the starting number in the table? .....

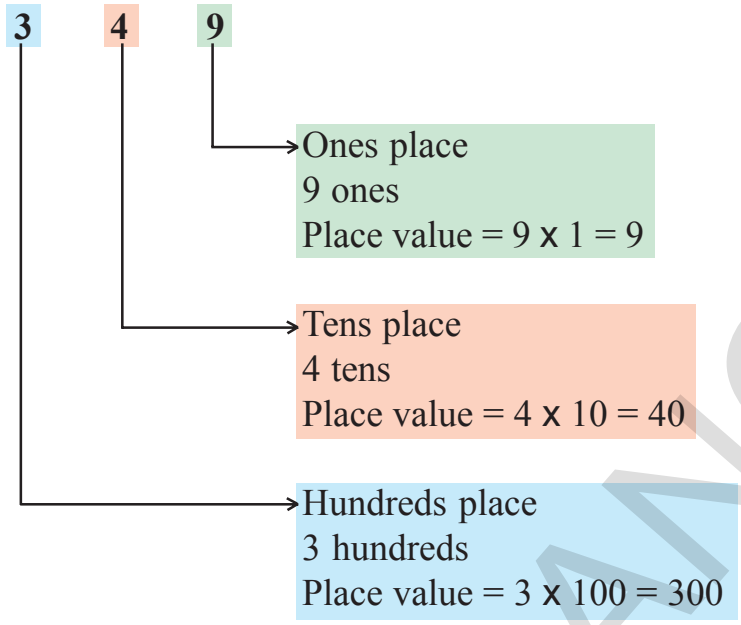
(B) What is the number after 197? .....

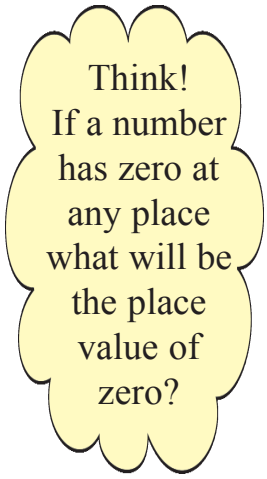
(C) What is the number before 161? .....

(D) What is the number between 149 and 151? .....

(E) What is the last number in the table? .....

See and understand





Now, see the table

Number	100	10	1	Place value of 4
4			4	4
42		4	2	40
425	4	2	5	400

As we move to the left in a number, the place value keeps on increasing.

1. Circle the correct numbers.

Example :	**5 in the tens place**	**574**	**456**	**235**	**165**
(A)	6 in the ones place	: 128	761	621	176
(B)	3 in the hundreds place	: 27	461	399	939
(C)	8 in the tens place	: 828	108	811	880

2. Write the place value of the underlined digit.

Example : 674 : 6 x 100 = 600

(A) 256 : _____ (B) 390 : _____

(C) 786 : _____ (D) 626 : _____

(E) 301 : _____ (F) 691 : _____

3. Write the numbers.

(A) A number with 5 in ones place, 2 in tens place and 7 in hundreds place.

(B) A number with 8 in tens place, 0 in ones place and 4 in hundreds place

(C) A number with 7 in hundreds place, 1 in tens place and 0 in ones place.

(D) A number with 7 in ones place, 2 in hundreds place and 5 in tens place.

4.  Bicku and Lata are playing with the numbers table in question 6 in page 21. You can also join. 

Bicku : What is the first number in second row?

Lata : What is the number between 144 and 146?

Biku : What is the number after 177?

Lata : What is the number before 200.

Bicku : What is the number 5 boxes after 162.

Lata : What is the number 4 boxes before 165.

Bicku : What is the number in the box above 155.

Lata : What is the number in the box below 186.

Bicku : From where should you start, if you reach 138 on counting 3 boxes.

Bricks in groups

Bricks have been brought to Mayuri's house by truck and arranged in rows of 10, as given below-

Mayuri started counting the bricks in groups. She first counted 100 bricks in each of the two bottom most groups. In the other groups she found 70 bricks, with 10 bricks in each group. 4 bricks were left lying on top. She counted the bricks in the following way :

Groups of 100 bricks	Groups of 10 bricks	Bricks left	Total number of bricks
2	7	4	200 + 70 + 4 = 274

1. The bricks are arranged in groups as shown above. Count the total number of bricks.

Groups of 100 bricks	Groups of 10 bricks	Remaining bricks	Total number of bricks
5	8	9	
6	0	2	
7	5	0	

2. See the following table. Arrange the total number of bricks in groups as shown in example.

Total number of bricks	Groups of 100 bricks	Groups of 10 bricks	Bricks left
185	1	8	5
625			
378			
209			
430			

In Thimmapur school four children have written the number 237 on a black board in different ways-

Venu → 2 hundreds + 3 tens + 7 ones.
Soni → 200 + 37
Sangeeta → 200 + 30 + 7
Raziya → 100 + 100 + 30 + 7

Have all the four children written correctly?

See the following example

Example : 237 = 2 hundreds + 3 tens + 7 ones
= 2 x 100 + 3 x 10 + 7 x 1
= 200 + 30 + 7

This is called the expanded form of 237.

Can you write 198 in all these different ways?

3. Write the correct digit of the place mentioned in the blank boxes.

Example : 927 = 9 Hundreds + 2 Tens + 7 Ones

(A) 769 = ☐ Hundreds + ☐ Tens + ☐ Ones

(B) 126 = ☐ Hundreds + ☐ Tens + ☐ Ones

(C) 407 = ☐ Hundreds + ☐ Tens + ☐ Ones

(D) 679 = ☐ Hundreds + ☐ Tens + ☐ Ones

(E) 223 = ☐ Hundreds + ☐ Tens + ☐ Ones

4. Write the following numbers in expanded form.

Example : 126 = 100 + 20 + 6

(A) 325 = _____ + _____ + _____

(B) 446 = _____ + _____ + _____

(C) 609 = _____ + _____ + _____

(D) 518 = _____ + _____ + _____

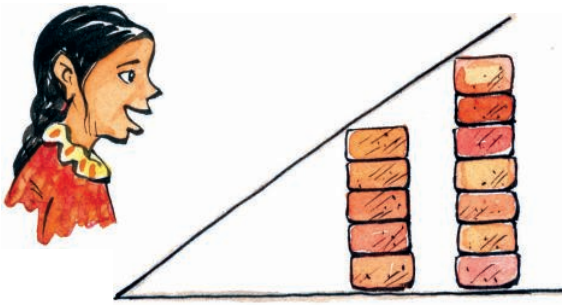
(E) 720 = _____ + _____ + _____

5. Circle the correct number as shown in the example.

Example :	200 + 4	24	42	204
(A)	400+20+3	324	423	420
(B)	500+60	506	650	560
(C)	800+80+8	850	888	880
(D)	700+5	705	750	570
(E)	40+0	440	44	40

Which is greater, which is lesser?

Mayuri arranges bricks like this. See and tell, which is greater and which is lesser.

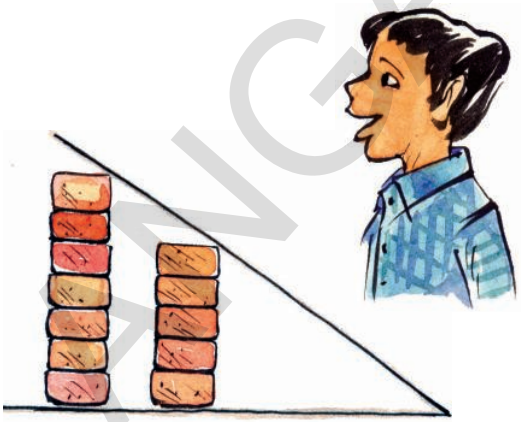


5 bricks 7 bricks

5 bricks are less than 7 bricks.

It means 5 is less than 7.

It is shown as 5 < 7.



7 bricks 5 bricks

7 bricks are more than 5 bricks.

It means 7 is greater than 5.

It is shown as 7 > 5.

2 bricks 2 bricks

Here, the number of bricks are equal.

It means 2 is equal to 2.

It is shown as 2 = 2.

Mayuri asked her friend to form 2 two-digit numbers using 5 and 7. She asked which is greater, which is lesser ? Can you help Mayuri's friend?

The numbers formed using the digits 5 and 7 are 57 and 75

57 = ☐ tens and ☐ ones

75 = ☐ tens and ☐ ones

Now, put the appropriate symbol- 57 ☐ 75

Do This

1. Write the correct symbol >, <, = in the blank boxes.

Example : 35 < 53 | 53 = 53 | 53 > 35

(A) 86 ☐ 68

(B) 27 ☐ 72

(C) 68 ☐ 68

(D) 89 ☐ 75

> is greater than

< is less than

= is equal to

2. The three-digit numbers formed using 2, 6 and 7 are 267, 276, 627, 672, 726, 762. Can you write the hundreds, tens, ones in these numbers?

(A) 267 = ☐ Hundreds ☐ Tens ☐ Ones

(B) 276 = ☐ Hundreds ☐ Tens ☐ Ones

(C) 627 = ☐ Hundreds ☐ Tens ☐ Ones

(D) 672 = ☐ Hundreds ☐ Tens ☐ Ones

(E) 726 = ☐ Hundreds ☐ Tens ☐ Ones

(F) 762 = ☐ Hundreds ☐ Tens ☐ Ones

3. Write which is greater, which is lesser.

(A) Between 267 and 276, which is lesser ☐

(B) Between 627 and 672, which is greater ☐

(C) Between 726 and 762, which is lesser ☐

(D) Between 267 and 627, which is greater ☐

(E) Between 762 and 672, which is lesser ☐

4. Write the correct symbol >, <, = in the blank boxes.

Example : 189 < 678 | 205 = 205 | 126 > 75

(A) 275 ☐ 725 (B) 853 ☐ 624

(C) 47 ☐ 374 (D) 605 ☐ 506

(E) 137 ☐ 73 (F) 199 ☐ 199

5. Circle the greatest number in the following.

Example :	57	67	97
(A)	35	43	102
(B)	404	444	440
(C)	820	822	828
(D)	42	24	41
(E)	147	141	174

6. Arrange the following numbers in ascending order.

Example : 64, 35, 79, 84 Ascending order : 35, 64, 79, 84

(A) 84, 79, 85, 105

(B) 106, 110, 155, 143

(C) 89, 178, 254, 675

Ascending order means arranging numbers from smallest to biggest

7. Arrange the following numbers in descending order.

Example : 48, 57, 95, 34 Descending order : 95, 57, 48, 34

(A) 77, 156, 198, 256

(B) 184, 295, 154, 695

(C) 259, 654, 794, 385

Descending order means arranging numbers from biggest to smallest

8. Some numbers are given here. Circle the range that the number lies in.

Example :	885	:	800–850	850–900	750–800
	98	:	80–90	90–100	100–110
	632	:	600–650	650–700	700–750
	304	:	250–300	300–350	350–400
	287	:	200–250	250–300	300–350
	945	:	800–900	900–999	400–500

9. Do the following.

(A) Write all the possible three-digit numbers using 4, 6, 9.

(B) Write all the possible numbers with 5 in the units place between 50 and 150.

(C) Write all the possible numbers between 800 and 900 which have 6 in the tens place.

10. Form the greatest and smallest 3-digit number using the digits given below.

		Greatest number	**Smallest number**
(A)	9, 3, 2	_____	_____
(B)	1, 4, 2	_____	_____
(C)	2, 3, 9	_____	_____
(D)	5, 6 ,1	_____	_____
(E)	1, 0 ,8	_____	_____

11. Write the correct numbers in the blanks.

(A) 127, 128, 129, _____, _____

(B) 497, 498, 499, _____, _____

(C) 699, _____, _____, 702, 703

(D) 99, _____, _____, _____, 103

(E) 997, 996, 995, _____, _____

12. Write the following numbers as shown in the example.

Example : Four hundred and twenty five : 425

(A) Nine hundred and seven : _____

(B) Eight hundred and forty two : _____

(C) Six hundred and thirty : _____

(D) Two hundred and ninety four : _____

(E) Five hundred and fifty five : _____

13. Write the following numbers in words.

Example : 549 : Five hundred and forty nine

(A) 604 :_____

(B) 858 :_____

(C) 985 :_____

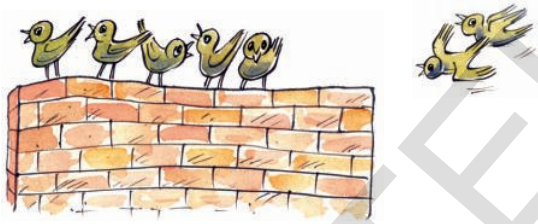
(D) 684 :_____

(E) 450 :_____

3 ADDITION

Sita and Geeta were playing in the school ground. Sita saw birds on the wall and asked Geeta, "How many birds are there?" Help Geeta to count the number of birds on the wall.

Number of birds on the wall ☐



How many are joining them ☐

All together how many ☐

We can write the above as ☐ + ☐ = ☐

Shafi has 9 beeds and Sanjeev has 6 beeds. How many beeds are there in all? Count and write.

Shafi has  ☐

Sanjeev has  ☐

All together  ☐

We can write the above as ☐ + ☐ = ☐

How many students are there in Kondur school?

The table given below provides information about the number of students in classes I to V in Kondur school. Find out how many students are there in each class.

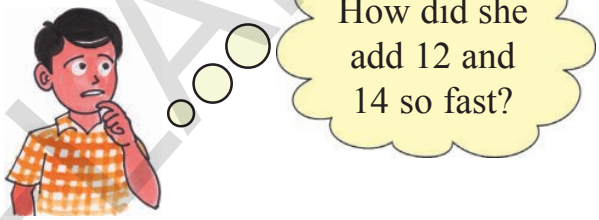
	Class I	Class II	Class III	Class IV	Class V	Total
Boys	12	13	14	16	13	68
Girls	14	15	15	14	21	79
Total						

Janu saw the table and said that in class I there are -

12 Boys → 12 means 10 + 2

14 Girls → 14 means 10 + 4

Total students = 12 + 14 = 26.



Let me also try.

In class I, 12 boys and 14 girls.

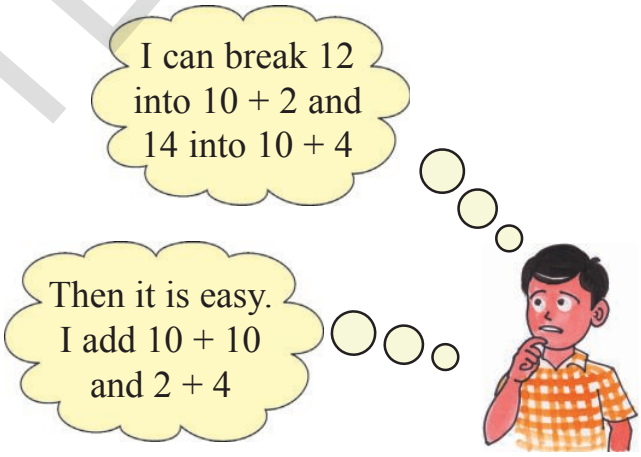
So 12 + 14

= 10 + 2 + 10 + 4

= 20 + 2 + 4

= 20 + 6

= 26



See if you can do the same for class II, III, IV and V students.

Class II → 13 + 15

= ☐ + ☐ + ☐ + ☐

= ☐ + ☐ + ☐

= ☐ + ☐

= ☐

Class III → 14 + 15

= ☐ + ☐ + ☐ + ☐

= ☐ + ☐ + ☐

= ☐ + ☐

= ☐

Class IV → 16 + 14

= ☐ + ☐ + ☐ + ☐

= ☐ + ☐ + ☐

= ☐ + ☐

= ☐

Class V → 13 + 21

= ☐ + ☐ + ☐ + ☐

= ☐ + ☐ + ☐

= ☐ + ☐

= ☐

I can also do in this way

13 + 21

= 13 + 20 + 1

= 14 + 20

= 34

Try These

1. Now workout the steps in your mind. Write the answers in the boxes.

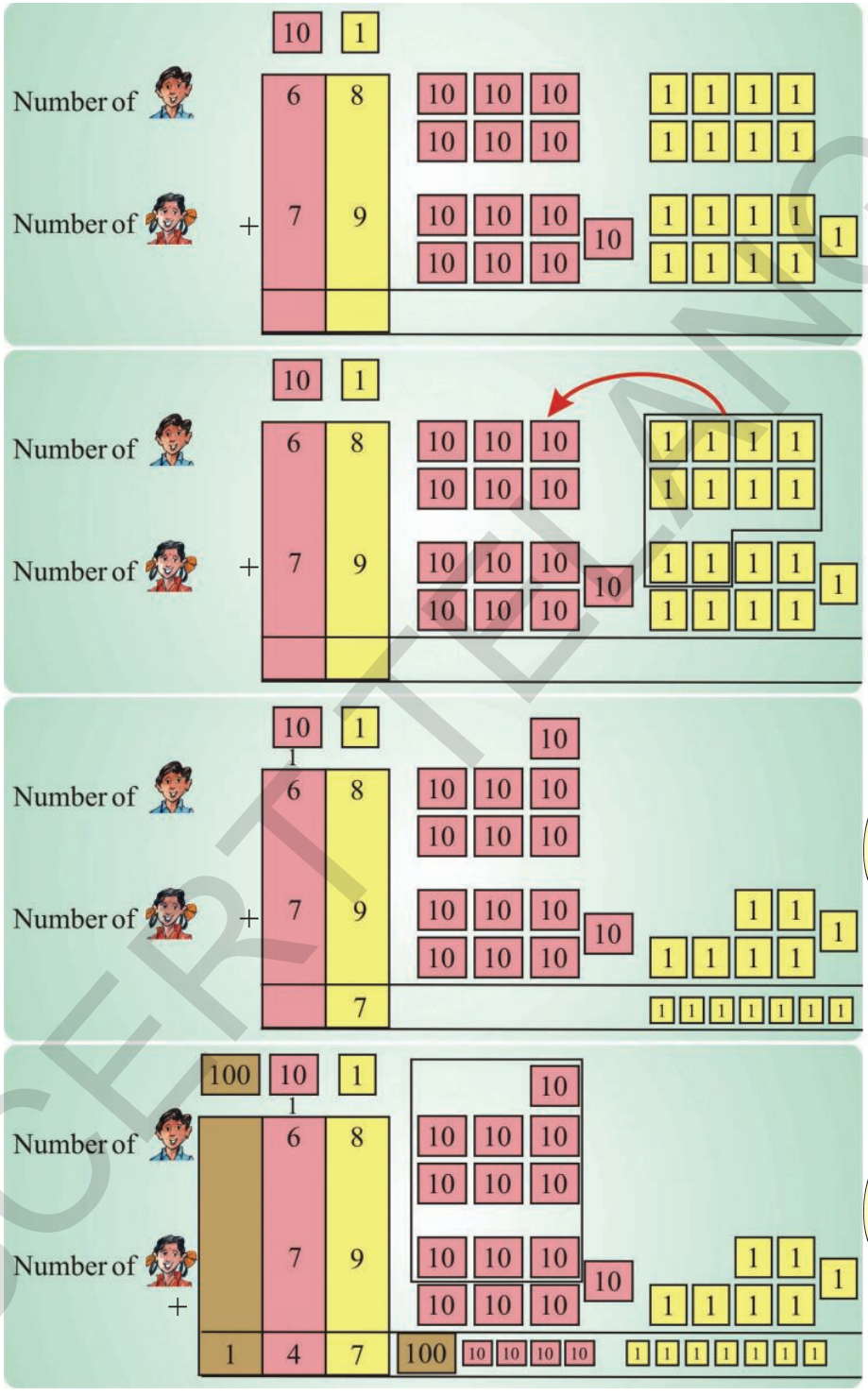
(A) 43 + 25 = ☐ (B) 63 + 36 = ☐

(C) 27+ 51 = ☐ (D) 83 + 15 = ☐

(E) 60 + 25 = ☐ (F) 45 + 20 = ☐

Carefully look at the table again.

The total number of boys in Kondur school is 68 and the total number of girls is 79. What is total number of students in Kondur school? Let us add the number of boys and girls.



So, the total number of students in Kondur school is 147.

Try These

(A)
	10	1
	2	7
+	4	8

(B)
	10	1
	6	8
+	2	3

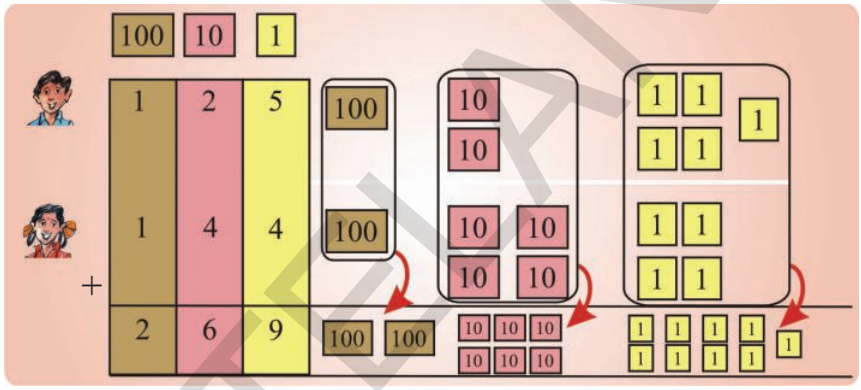
(C)
	10	1
	3	9
+		8

(D)
	10	1
	7	5
+	2	6

How many students are there in Thimmapur school?

There are 125 boys and 144 girls in Thimmapur school. What is the total number of students in the school?

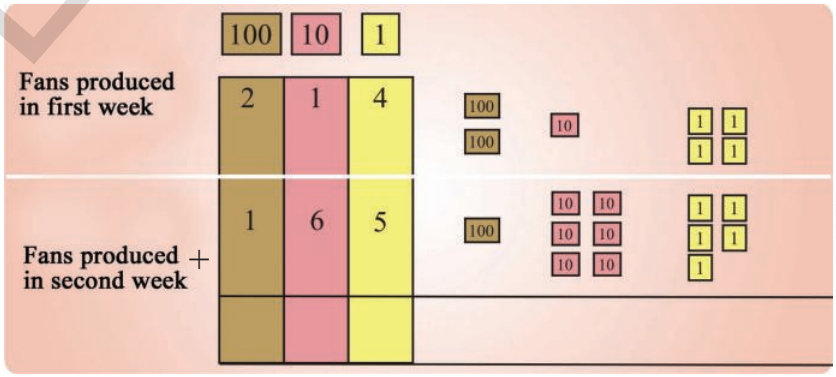
Let us find the total number of students in the school.

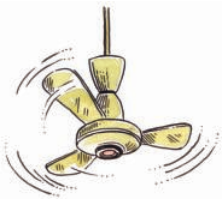


So, the total number of students in Timmapur school is 269.

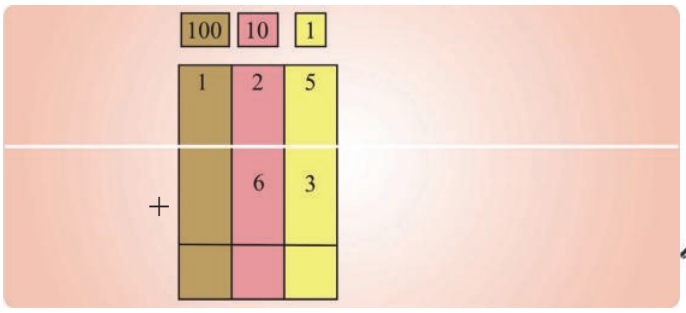
Try These

1. A factory produced 214 fans in the first week and 165 fans in the second week. How many fans did the factory produce in the two weeks altogether?





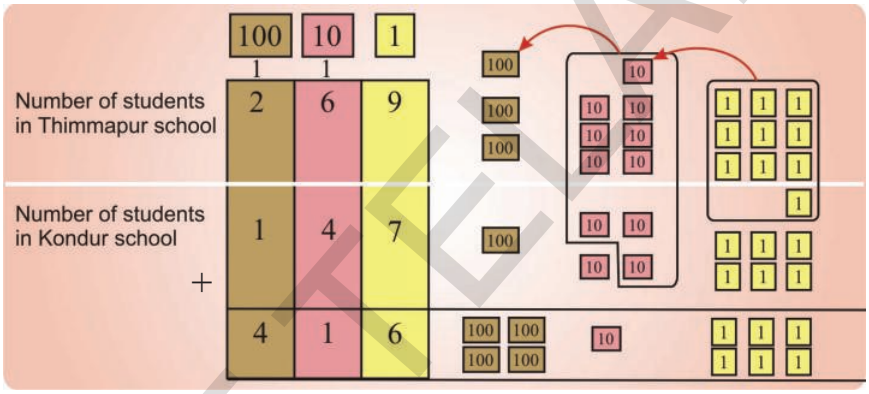
2. Raju have 125 marbles and Kishore have 63 marbles. How many marbles altogether they have?



How many students are there in both schools?

We know that the total number of students in Kondur school is 147. We also know that the total number of students in Thimmapur school is 269.

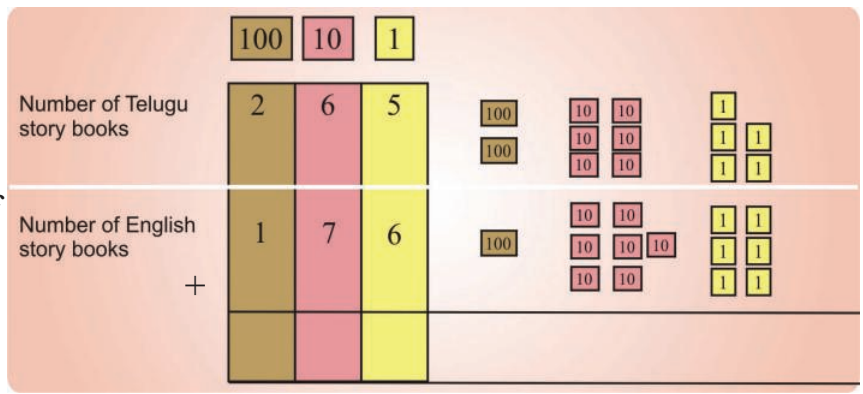
Let us find the total number of students in the two schools.



So, the total number of students in both schools is 416.

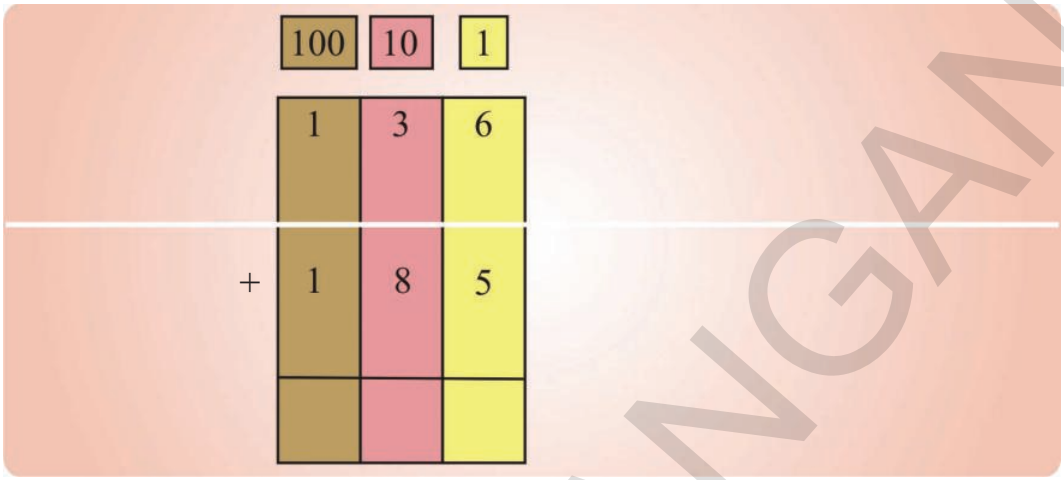
Try These

1. Thimmapur school library has 265 Telugu story books and 176 English story books. How many story books does the school have altogether?



The total number of story books all altogether is _____

2. A fruit-seller sold 136 oranges and 185 apples in one day. How many fruits did the fruit seller sell in the day?



Do This

(A)

100	10	1
2	7	5
+ 1	0	6

(B)

100	10	1
1	6	8
+ 2	4	0

(C)

100	10	1
3	9	3
+ 1	8	7

(D)

100	10	1
7	2	6
+	7	5

(E)

100	10	1
6	0	9
+	9	8

(F)

100	10	1
5	4	7
+ 2	7	5

(G) 145 + 22 = ☐

(H) 365 + 103 = ☐

(I) 263 + 210 = ☐

(J) 103 + 425 = ☐

(K) 320 + 46 = ☐

(L) 85 + 104 = ☐

How many bricks?

A kitchen is being constructed in Thimmapur school. 475 bricks are available. The mason brings 220 more bricks to complete the construction. A total of how many bricks are used to construct the kitchen?

Think!

Is 475 + 220 more than 600 or less than 600?

		100	10	1
Number of bricks in the school		4	7	5
Number of bricks the mason brings	+	2	2	0
Total number of bricks		6	9	5

Try This

1. John and Gopi are playing with pebbles. John has 163 pebbles. He wins 125 more pebbles. How many pebbles does John have now?

		100	10	1
John's pebbles initially		1	6	3
Pebbles won by John	+	1	2	5
John's pebbles				

Think!

Is 163 + 125 more than 200 or less than 200?

How many laddoos do you need?

It was decided to distribute a laddoo to each person on Independence Day in Palasa school. There were 245 students and 13 teachers. Two girls Laxmi and Rani calculated the number of laddoos required for distribution, as given below-

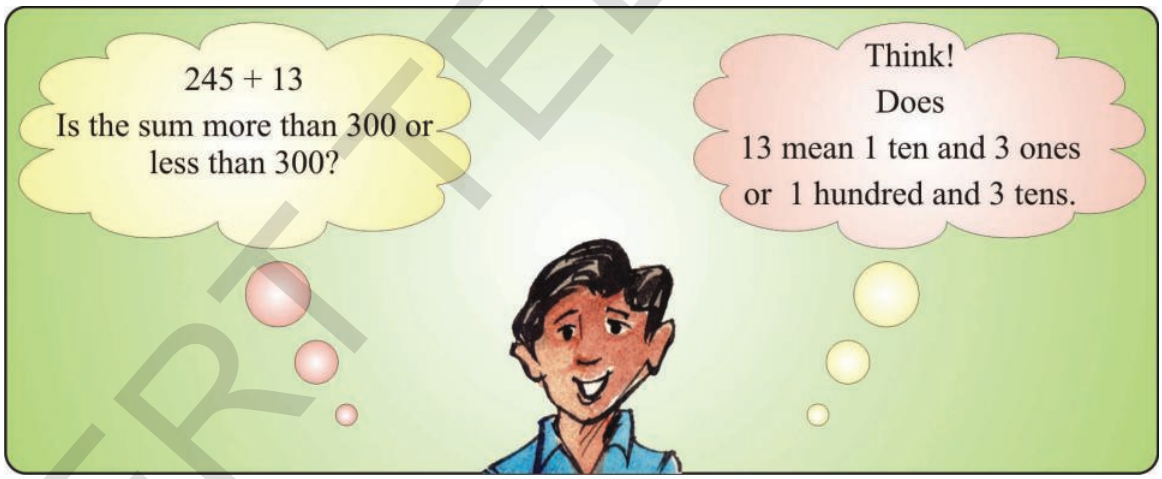
Laxmi 

 Rani

$$\begin{array}{r} 245 \\ +\ 13 \\ \hline 375 \\ \hline \end{array}$$

$$\begin{array}{r} 245 \\ +\ 13 \\ \hline 258 \\ \hline \end{array}$$

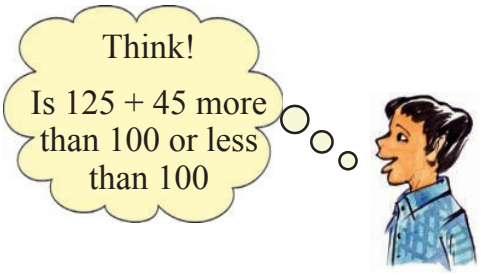
Who added correctly? Why?



Try These

1. Ravi had ₹ 125. His father gave ₹ 45 to him. How many rupees does Ravi have now?

	100	10	1
Ravi had	1	2	5
Father gave	+	4	5
Total			



2. A teacher kept a note of the number of story books and story cards were read by boys and girls in the school. This is what she found:

Students	Story books	Story cards
Girls	129	237
Boys	75	150

Find out:

(A) How many total story books and story cards were read by girls?

(B) How many total story books and story cards were read by boys?

(C) How many total story books were read by the students?

(D) How many total story cards were read by the students?

How many chalk boxes?

In Salur school, children make chalks and distribute to other schools. In one month they made 175 chalk boxes and in the next month they made 127 chalk boxes. After the two months Gopi asked his friend Rafi, "how many chalk boxes have we made?"

Gopi and Rafi found the total number of boxes in the following way-

1 7 5
1 2 7
3 2

1 7 5
1 2 7
3 0 2

Who has made a mistake?

What is the mistake?

Do This

1. Add the following.

(A)
100	10	1
2	7	6
+ 3	1	3

(B)
100	10	1
6	0	3
+ 2	5	6

(C)
100	10	1
5	2	0
+ 3	0	7

(D)
100	10	1
3	4	9
+	2	4

(E)
100	10	1
2	6	3
+	8	4

(F)
100	10	1
1	4	9
+	6	5

(G)
100	10	1
3	2	5
+ 4	9	8

(H)
100	10	1
3	9	4
+ 1	0	8

(I)
100	10	1
2	0	9
+	8	4

(J)
100	10	1
5	4	9
+ 2	6	5

(K)
100	10	1
3	0	9
+ 4	0	8

(L)
100	10	1
6	1	4
+ 1	0	8

2. Answer the following.

(A) There were 215 students in Kanala school. After it was reopened in June, 67 more students joined. How many students are there in the school now?

(B) There are 135 mango trees and 145 guava trees in a garden. How many trees are there in all in the garden?

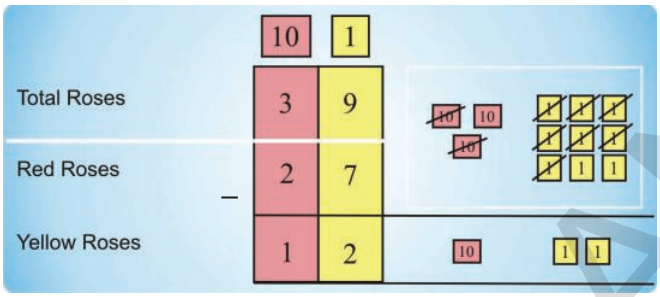
(C) Rama's age is 37 years. Sita's age is 18 years more than Rama's age. What is Sita's age?

(D) Keerthi travelled 45 km by car and 176 km by bus. What is the total distance travelled by Keerthi?

(E) Ravi has 2 hundred rupee notes, 6 ten rupee notes and 5 one rupee notes. Sita has 3 hundred rupee notes and 5 ten rupee notes. How much money do both have altogether?

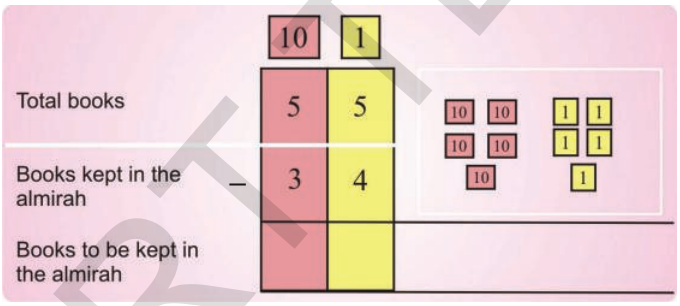
4 SUBTRACTION

Raghu and Divya pluck 39 roses in the garden. 27 roses are red and the remaining are yellow. How many yellow roses did they pluck?

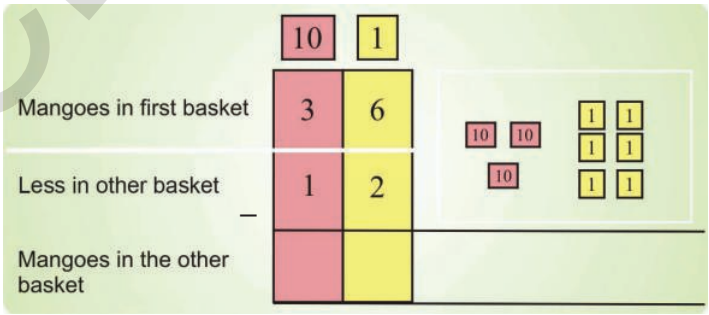


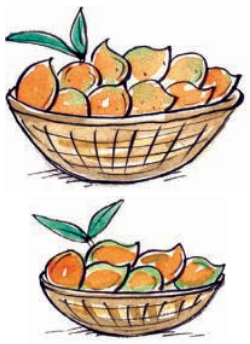
Try These

1. Jangu had 55 books. He kept 34 books in the almirah. How many more books does he need to keep in the almirah?



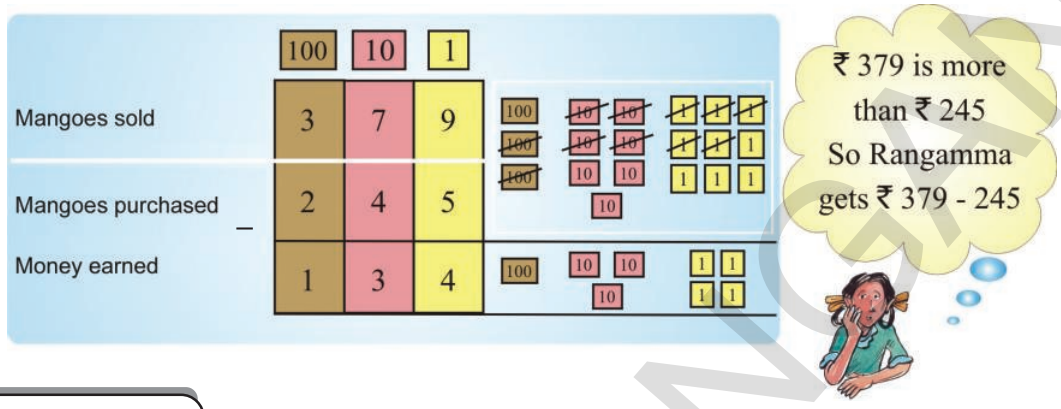
2. Mary bought two baskets of mangoes. In one basket there are 36 mangoes. In the other basket there are 12 mangoes less than the previous one. How many mangoes are there in the other basket?





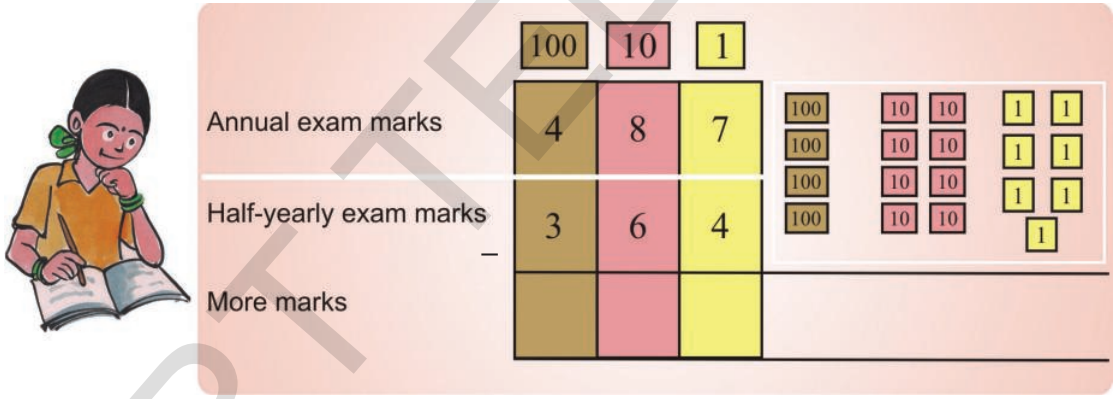
How much money did Rangamma earn?

Rangamma sells mangoes. She purchased mangoes for ₹ 245 and sold them for ₹ 379. How much money did she earn?



Try This

1. Shirisha got 364 marks in her half-yearly exam. She got 487 marks in her annual exam. How many more marks did Shirisha get in the annual exam?



Do This

(A) 10 1: 6 7 − 3 = _____

(B) 10 1: 9 7 − 2 1 = _____

(C) 10 1: 4 9 − 2 1 = _____

(D) 100 10 1: 2 7 5 − 1 4 3 = _____

(E) 100 10 1: 4 2 9 − 1 2 3 = _____

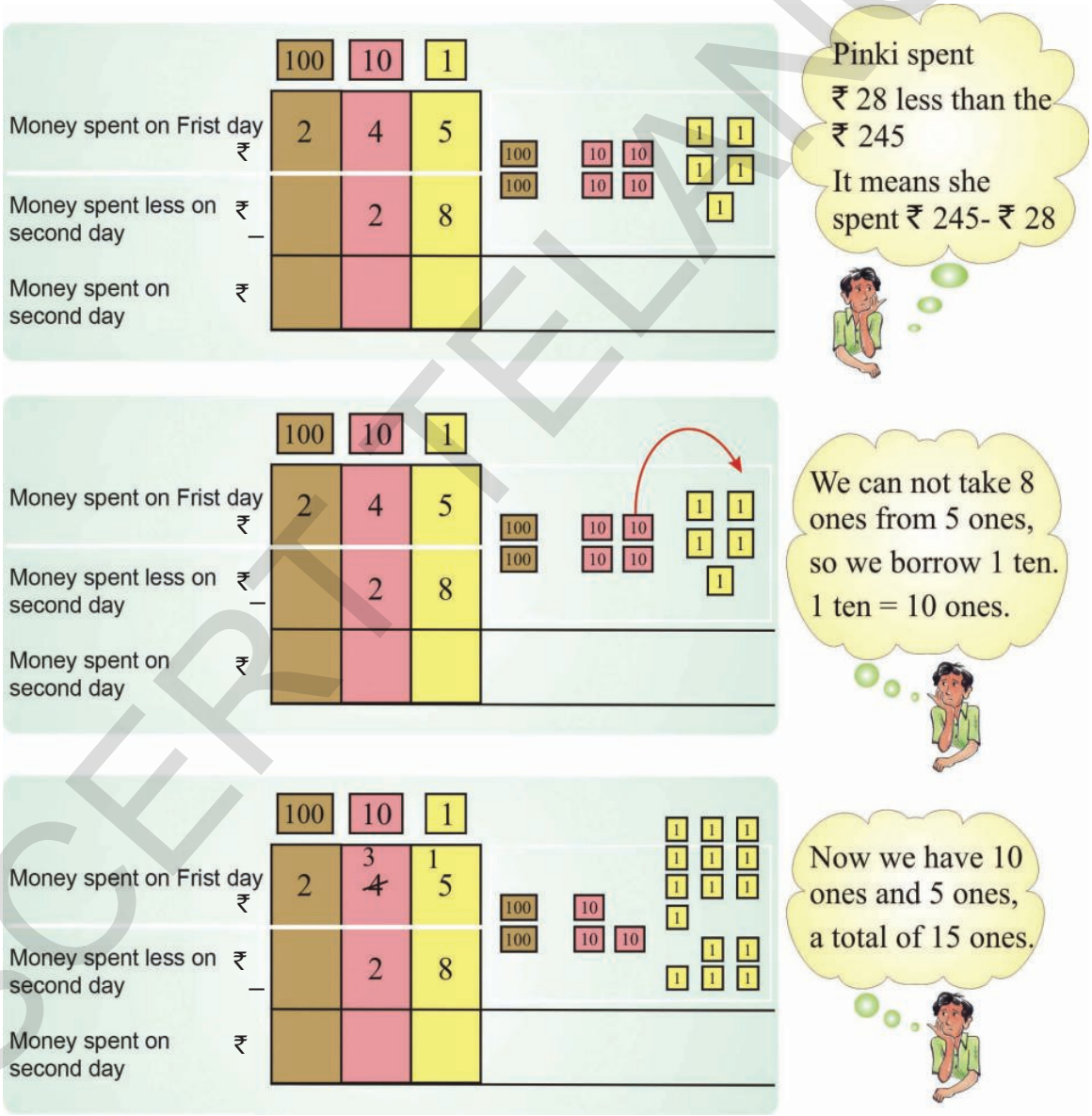
(F) 100 10 1: 3 4 8 − 1 2 6 = _____

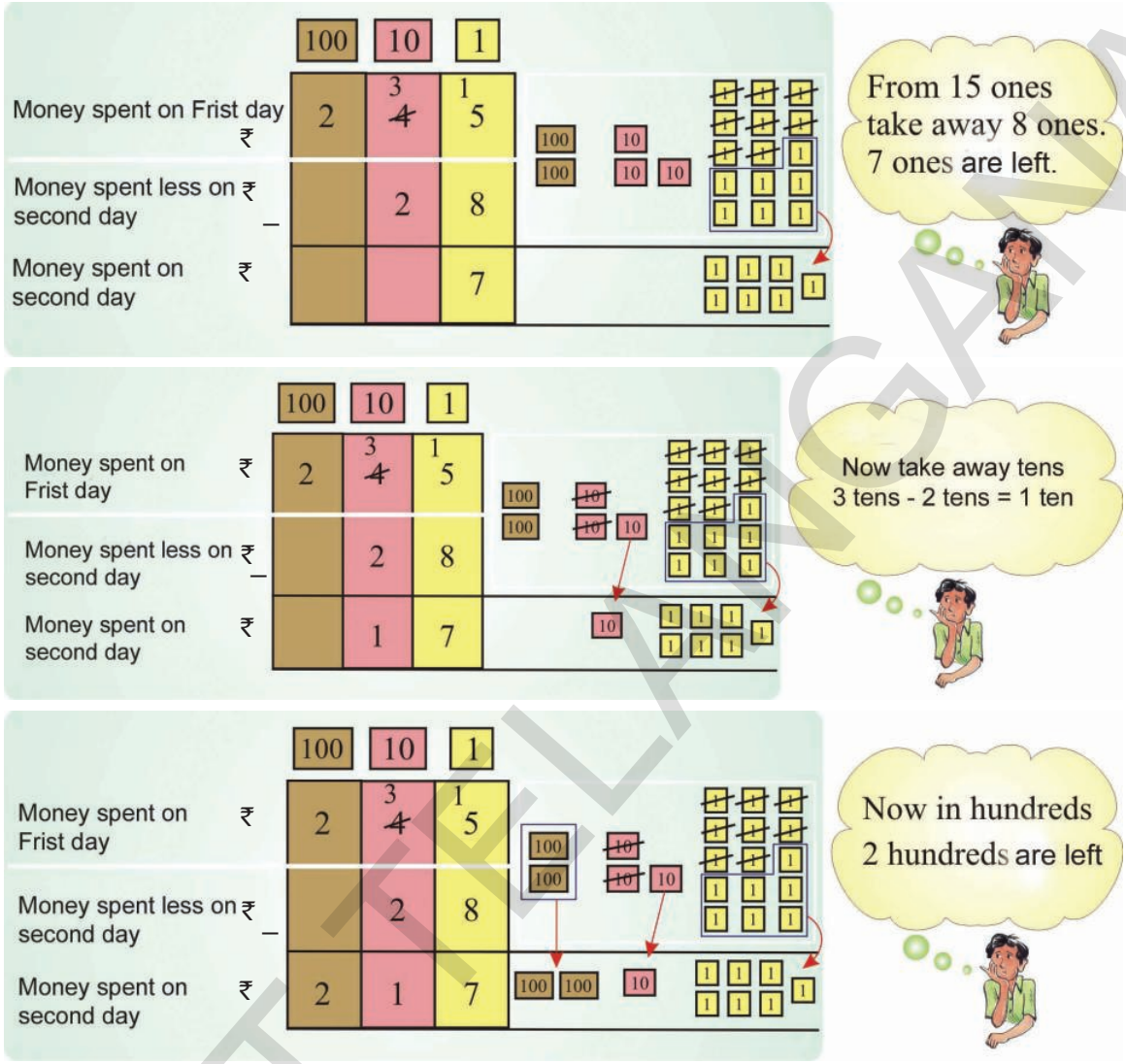
(G) 100 10 1: 2 7 5 − 1 4 3 = _____

(H) 100 10 1: 4 1 7 − 2 0 6 = _____

How much did Pinki spend ?

Pinki wanted to buy fruits. One day she went to Rangamma and bought some fruits for ₹ 245. The next day she bought fruits for ₹ 28 less than the previous day. How much money did Pinki spend on the second day?

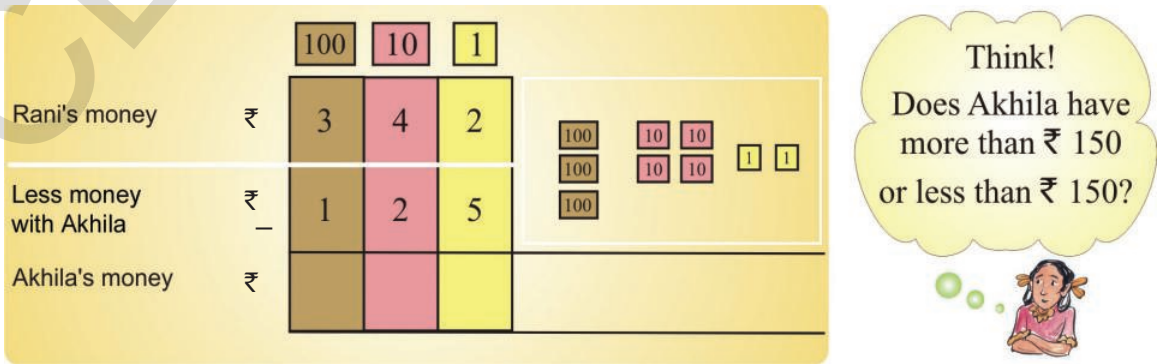




Pinky spent ₹ 217 to buy fruits on the second day.

Try These

1. Rani has ₹ 342. Akhila has ₹ 125 less than Rani. How much money does Akhila have?



2. Baby tortoise is 47 year old. Mother tortoise is 160 years old. By how many years is baby tortoise younger than the mother tortoise?

Age of mother tortoise : ____ years

Age of baby tortoise : ____ years

	100	10	1
	1	6	0
−		4	7

Think!
Is 160 – 47 more than 100 or less than 100?

Baby tortoise is _____ years younger than mother tortoise.

3. Gowry has read 194 pages of a story book. Swetha has read 128 pages of the story book. Who has read more pages? How many more?

	100	10	1
	1	9	4
−	1	2	8

Think!
Is 194 – 128 less than 100 or more than 100

Do This

(A)

100	10	1
2	7	4
	2	9

(B)

100	10	1
3	4	5
1	2	7

(C)

100	10	1
2	4	3
1	9	2

(D)

100	10	1
4	1	9
	2	8

(E)

100	10	1
3	1	9
1	7	9

(F)

100	10	1
5	9	3
2	6	9

Who is the winner?

In a cricket match Bhawani's team made 324 runs. Ikram's team is batting and has made 198 runs. How many more runs does Ikram's team need to win?

Let us find out -

To win Ikram's team must make 325 runs.

Runs needed to win 325 – 198 = ?

		100	10	1
Runs to win		2 ~~3~~	1 1 ~~2~~	1 5
Runs made by Ikram's team	–	1	9	8
Runs needed		1	2	7

So, the runs needed by Ikram's team to win are 127.

Think!

5 ones are less than 8 ones.

1 ten is less than 9 tens.

How much electricity is being used?

Shalini and Shameem note the electricity meter's reading every month of their school. Last month the reading was 168 units. This month the reading is 250 units. How much electricity did the school use in this month?

Shalini and Shameem wish to calculate the total number of units used in the month. They did the subtraction like this-

	Shalini	Shameem
Present month reading	2 5 0	2 5 0
Last month reading	– 1 6 8	– 1 6 8
	1 1 8	8 2

Who subtracted correctly? Why?
How can you check the answer?

Try This

Anil had ₹ 328. After purchasing a story book he is left with ₹ 139. How much money did he spend on the story book?

		100	10	1
Money with Anil	₹	3	2	8
Money left after purchase of story book	₹ −	1	3	9
Money spent on story book	₹			

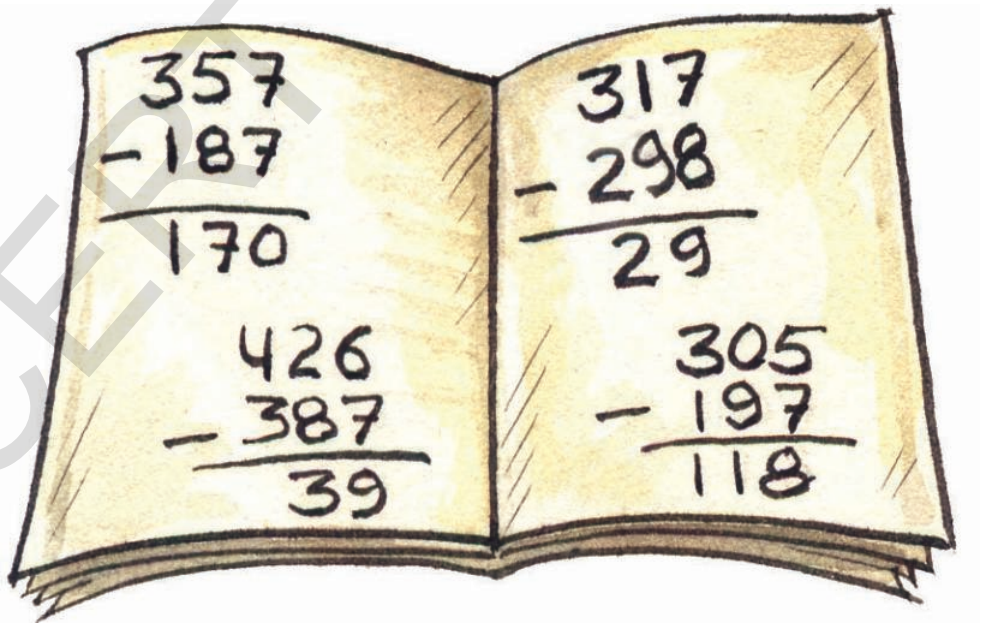
Think!

328 – 139

Is the difference about 200 or about 100?

Can you solve them correctly?

Gowri gave four problems to her brother Madhu. He did the problems in his note book. Gowri said out of the four only two are correct. Help Madhu to find the wrong answers and correct them.



Gowri made corrections for Madhu.

100	10	1
2	10	10
~~3~~	~~1~~	7
_ 2	9	8
	1	9

100	10	1
2	9	10
~~3~~	~~0~~	5
_ 1	9	7
	1	0	8

Do you agree with Gowri?

Do This

Gowri has some more problems. Can you solve them?

(A)

100	10	1
4	8	2
_ 1	2	9

(B)

100	10	1
6	0	4
_ 2	8	9

(C)

100	10	1
5	1	7
_ 2	8	9

(D)

100	10	1
3	0	0
_ 1	2	9

(E)

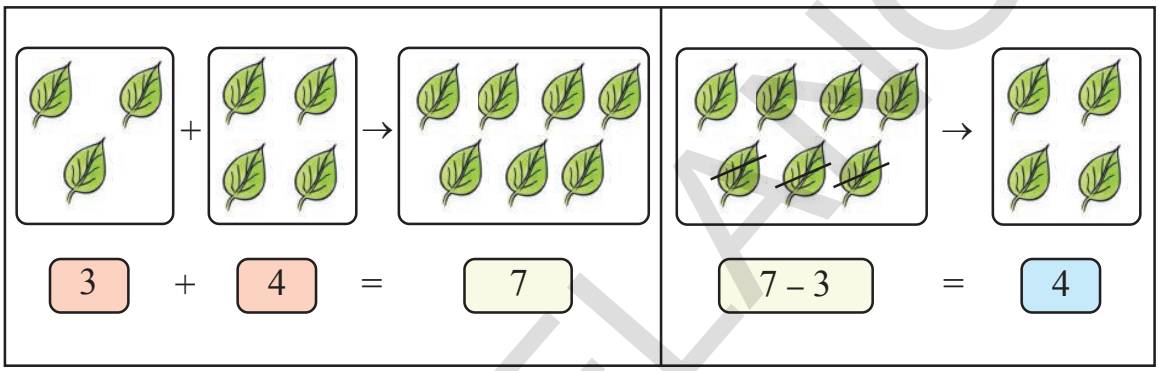
100	10	1
1	6	1
_	4	7

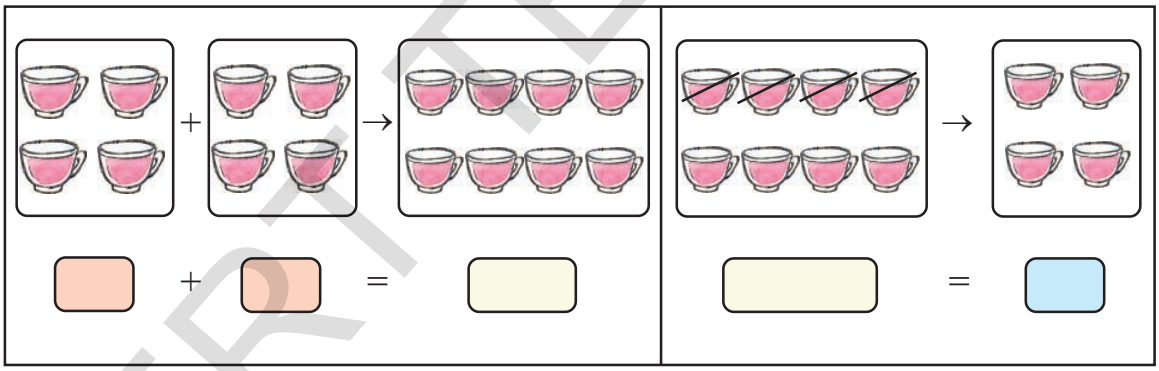
(F)

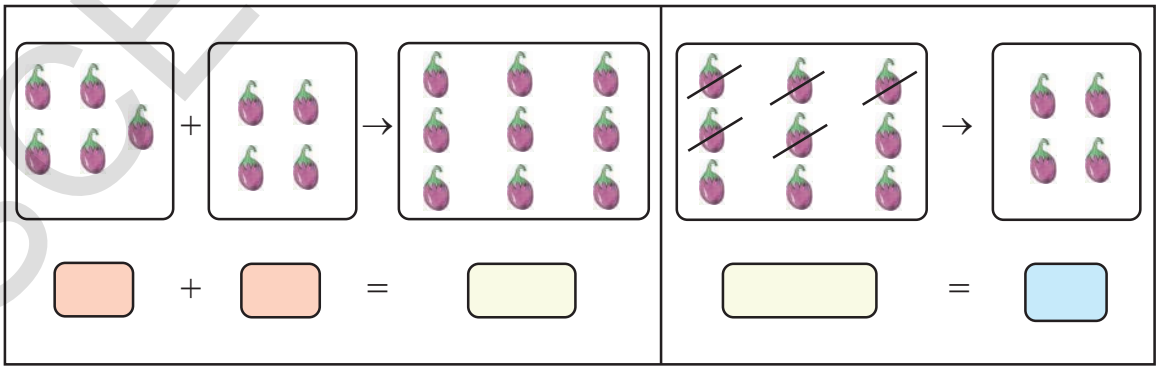
100	10	1
2	5	3
_ 1	2	5

5 USING ADDITION AND SUBTRACTION

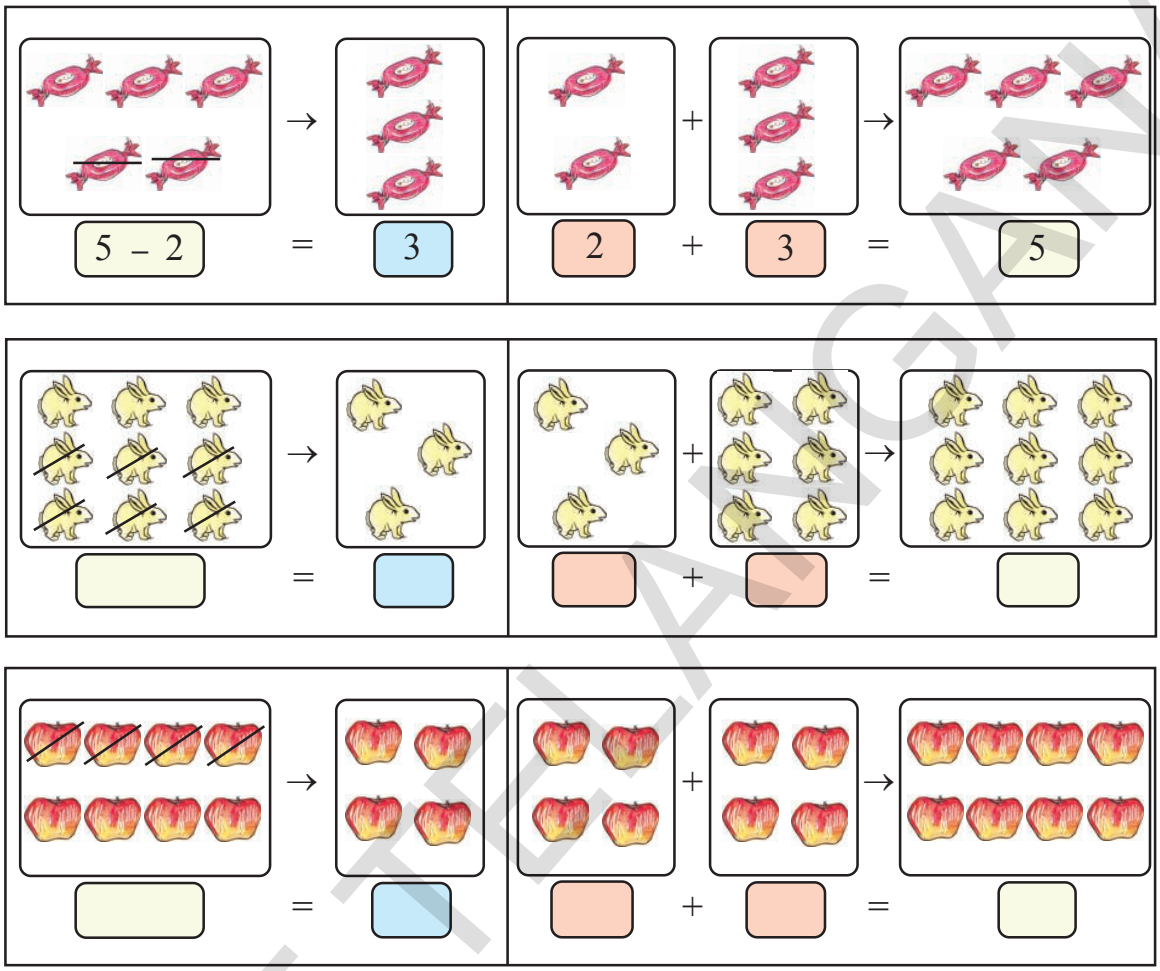
Kittu feels that addition and subtraction are related. Can you help Kittu solve the following problems.







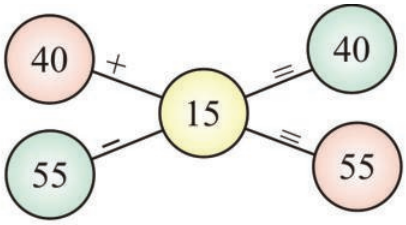
Here kittu subtracts first and then adds.



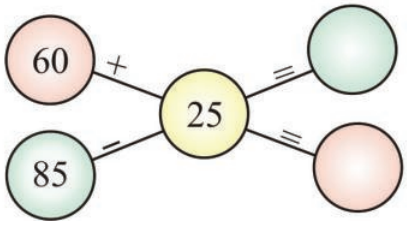
Try These

1. Look at the example. Write correct number in the ◯.

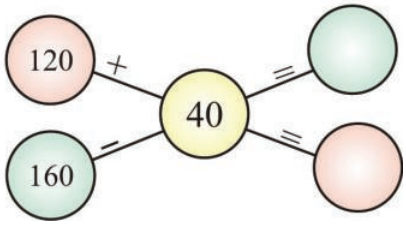
Example :



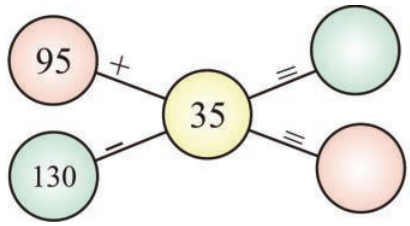
(A)



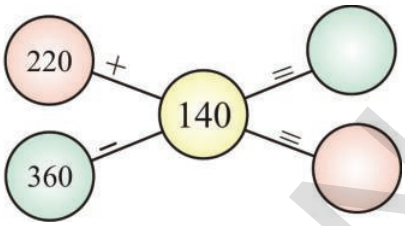
(B)



(C)



(D)



2. Check your answer yourself.

Pinky solved some subtraction problems. Geetha verified them with addition. Can you verify the rest of the problems like Geetha.

$$\begin{array}{r} 78 \\ -\ 25 \\ \hline 53 \end{array} \rightarrow \begin{array}{r} 53 \\ +\ 25 \\ \hline 78 \end{array}$$

$$\begin{array}{r} 260 \\ -\ 34 \\ \hline 226 \end{array} \rightarrow \begin{array}{r} 226 \\ +\ 34 \\ \hline 260 \end{array}$$

(A) $\begin{array}{r} 548 \\ -\ 326 \\ \hline 222 \end{array}$ $+\ \square\square\square$

(B) $\begin{array}{r} 468 \\ -\ 136 \\ \hline 332 \end{array}$ $+\ \square\square\square$

(C) $\begin{array}{r} 576 \\ -\ 329 \\ \hline 247 \end{array}$ $\square\square\square$

(D) $\begin{array}{r} 804 \\ -\ 321 \\ \hline 483 \end{array}$ $\square\square\square$

3. Fill the missing digits.

Example : $\begin{array}{r} 3\,\boxed{1}\,9 \\ -\ 1\,8\,\boxed{7} \\ \hline 1\,3\,2 \end{array}$

(A) $\begin{array}{r} \square\,6\,6 \\ -\ 2\,4\,8 \\ \hline 2\square\square \end{array}$ (B) $\begin{array}{r} 9\,\square\,6 \\ -\ 4\,5\,2 \\ \hline \square\,8\,\square \end{array}$ (C) $\begin{array}{r} 5\,0\,\square \\ -\ 1\,4\,3 \\ \hline 3\,5\,7 \end{array}$ (D) $\begin{array}{r} 7\,\square\,0 \\ -\ 3\,2\,\square \\ \hline 4\,1\,7 \end{array}$

Do This

1. Look at the number patterns. Fill up the missing numbers.

   (A) 100, 200, 300, 400 _____, _____, _____, _____

   (B) 900, 800, 700, _____, _____, _____, 300, _____

   (C) 50, 100, 150, _____, _____, _____, 350, _____

   (D) 650, 600, 550, _____, _____, _____, 350, _____

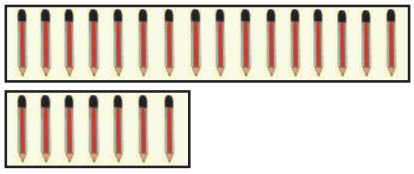
   (E) 25, 50, 75, 100, _____, _____, _____, _____

   (F) 750, 725, 700, 675, _____, _____, _____, _____

   (G) 800, 790, 780, _____, _____, _____, 740, _____

   (H) 653, 638, 623, _____, _____, _____, _____, _____

2. Indra has 16 pencils and Keshav has 7 pencils. Who have less? How many less?



3. Ask a shopkeeper or your parents.

Price of 1 kg sugar :

Price of 1 kg salt :

Which is more costly?

How much more does it cost?

4. Saleem sells colour charts in the school. In two days he sold some red, blue and white colour charts as given below.

Charts sold on first day	30	69	82
Charts sold on second day	49	25	74

Look at the above table and answer the following-

(A) How many red charts did Saleem sell in 2 days?

(B) Did he sell more blue charts than white charts in 2 days?

(C) How many red and blue charts did he sell on the second day? Tick (✓) the right answer.

More than 100 _____ Less than 100 _____

(D) How many blue and white charts did he sell on the first day? Tick (✓) the right answer.

More than 150 _____ Less than 150 _____

5. Karuna has ₹ 125. Her mother gave her some more money. Now Karuna has ₹ 275. How much money did Karuna's mother give her?

6. Srujana has some books. Her brother gave her 136 books. Now she has 245 books. How many books did Srujana have at first?

7. In a one-day cricket match, India made 326 runs. Sri Lanka made 179 runs less than India. How many runs did Sri Lanka make?

8. Rajesh has 235 toys. Mahesh has 26 toys more than Rajesh. How many toys does Mahesh have?

9. Aman travelled 320 km in two days. He travelled 175 km on the first day. How many kilometres did he travel on the second day?

Can you make questions of addition and subtraction. ?

Joseph and Riyaz went to a shop. They wanted to buy some articles. They saw the prices on the articles as shown below.

₹ 25

₹ 17

₹ 22

₹ 12

Riyaz bought a toothbrush and a toothpaste. He made his problem like this-

> The cost of a toothbrush is ₹ 17. The cost of a toothpaste is ₹ 25. What is the total cost?

Joseph bought a soap and a biscuit packet. He made his problem like this-

> The cost of the soap is ₹ 22. The cost of the biscuit packet is ₹ 12. How much more does the soap cost than the biscuit packet?

Try These

1. Now you make similar questions with the information given below-

   (A) Make an addition problem

I read 15 books

I read 29 books

(B) Make an addition problem

I skip 105 times

I skip 92 times

(C) Make a subtraction problem

65 chairs

19 tickets sold

(D) Make a subtraction problem

10 birds on tree

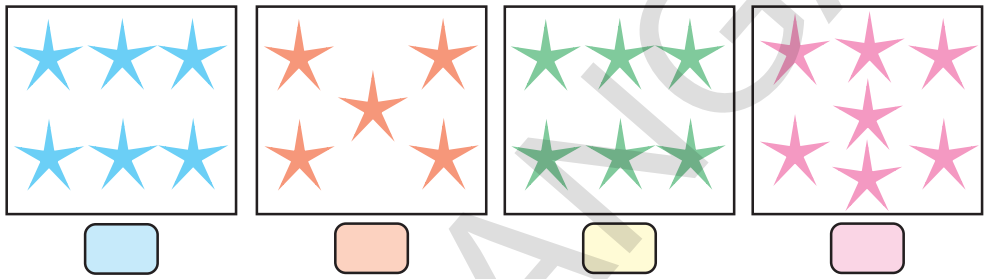
2 birds fly away

Discuss in groups and make some more problems of addition and subtraction.

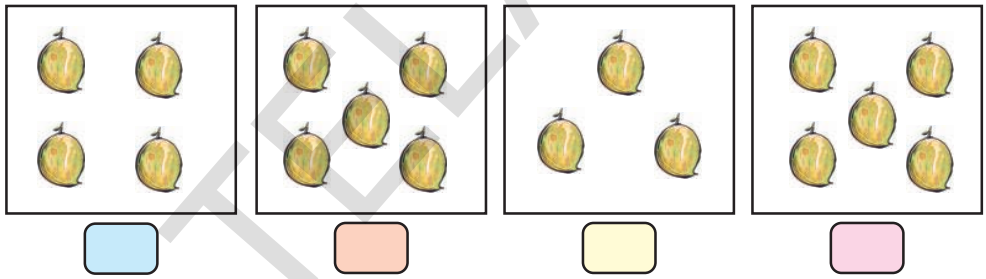
6 MULTIPLICATION

Tick (✓) the groups which have equal number of objects.

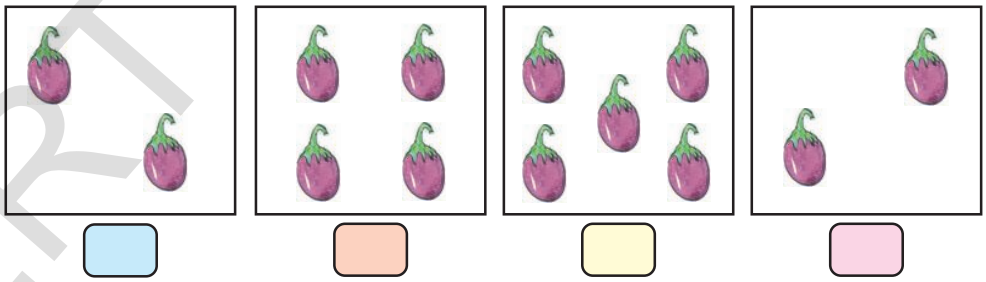
(A)



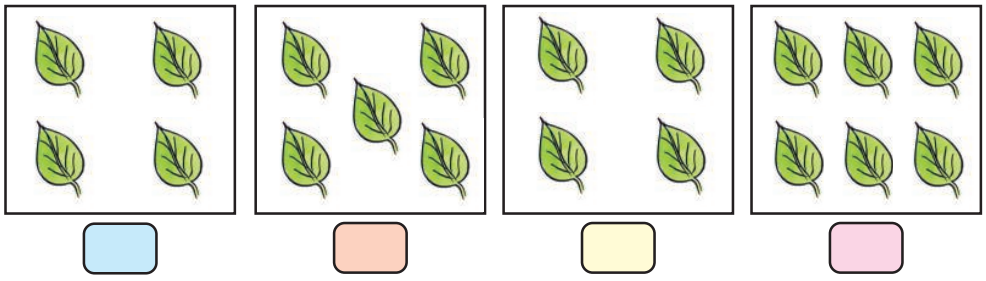
(B)



(C)

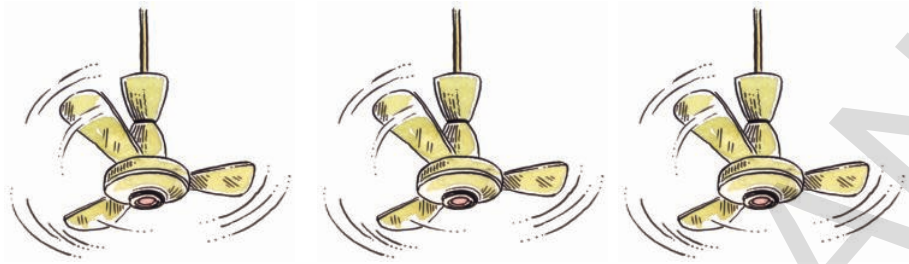


(D)



1. Count in groups and find total.

(A)



Total number of blades in 3 fans = ☐ + ☐ + ☐ = ☐

(B)

Total number of wheels in 4 bicycles = ☐ + ☐ + ☐ + ☐ = ☐

(C)

Total number of legs of 5 goats = ☐ + ☐ + ☐ + ☐ + ☐ = ☐

2. Write the sum of the following.

(A) 9 + 9 + 9 = ☐ (B) 7 + 7 + 7 + 7 + 7 = ☐

(C) 3 + 3 = ☐ (D) 5 + 5 + 5 + 5 = ☐

(E) 4 + 4 + 4 = ☐ (F) 6 + 6 = ☐

Sudhir's classroom

Look at the picture carefully.

Now answer the following questions-

How many groups of children are there? ☐

How many children are there in each group? ☐

Total number of children in the classroom is

☐ + ☐ + ☐ + ☐ = ☐

Here we are adding 4 groups of children and there are 3 students in each group. The total number of students are 12.

We can also say "4 times 3 is 12". This is written as 4 x 3 = 12.

'x' is the symbol of multiplication

Now look at the picture again and fill the following blanks-

Books :

(A) Number of groups =_____

(B) Number of books in each group =_____

(C) Total number of books are _____ times _____ = _____

or _____ x_____ = _____

Charts :

(A) Number of groups =_____

(B) Number of charts in each group =_____

(C) Total number of charts are _____ times _____ = _____

or _____ x_____ = _____

Kites :

(A) Number of groups =_____

(B) Number of kites in each group =_____

(C) Total number of kites are _____ times _____ = _____

or _____ x_____ = _____

Repeated addition is called multiplication.

Do This

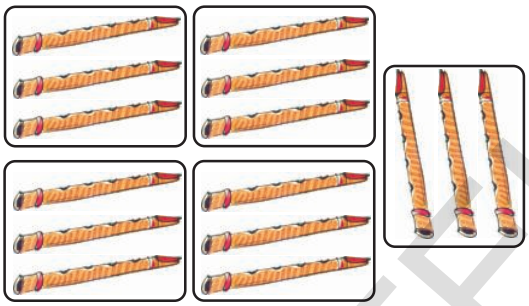
1. (A) How many candles are there?

Number of groups = ☐

Number of candles in each group = ☐

Total candles = ☐ x ☐ = ☐

(B) How many flutes are there?

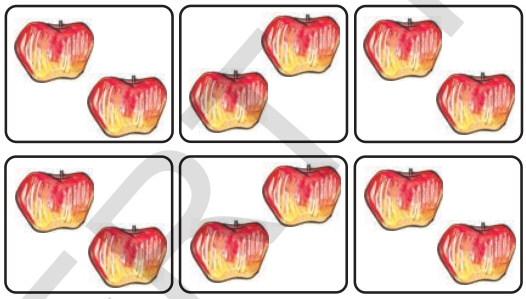


Number of groups = ☐

Number of flutes in each group = ☐

Total flutes = ☐ x ☐ = ☐

(C) How many apples are there?

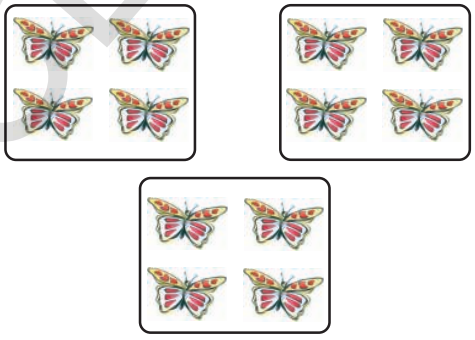


Number of groups = ☐

Number of apples in each group = ☐

Total apples = ☐ x ☐ = ☐

(D) How many butterflies are there?



Number of groups = ☐

Number of butterflies in each group = ☐

Total butterflies = ☐ x ☐ = ☐

2. Express the following in the form of multiplication.

(A) 5 + 5 + 5 = ☐ x ☐ = ☐

(B) 6 + 6 + 6 + 6 = ☐ x ☐ = ☐

(C) 7 + 7 = ☐ x ☐ = ☐

(D) 2 + 2 + 2 + 2 = _____

(E) 3 + 3 + 3 + 3 + 3 = _____

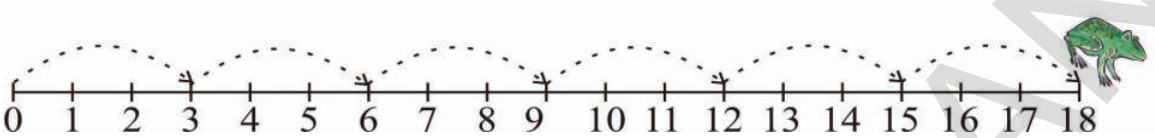
(F) 1 + 1 + 1 + 1 + 1 + 1 = _____

3. Match the locks to their keys.

Frogie Jumps

Multiplication can also be seen in step counting.

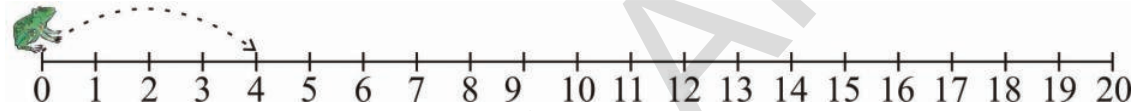
A frog jumped 3 steps in a single jump. It jumped 6 times.



This can be written as 6 times 3 or 6 x 3 = 18

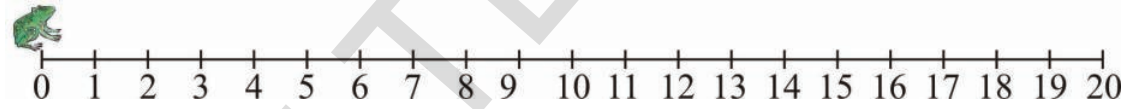
Express the following using multiplication-

(A) Frogie Jump = 4 steps; 5 jumps



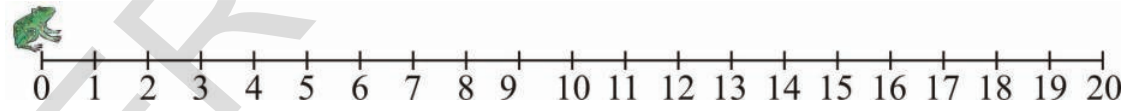
5 times 4 or 5 x 4 = 20

(B) Frogie Jump = 2 steps; 6 jumps



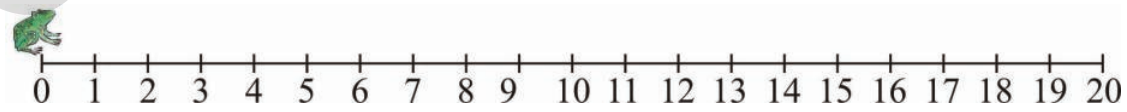
_____

(C) Frogie Jump = 3 steps; 4 jumps



_____

(D) Frogie Jump = 5 steps; 2 jumps



_____

Raju goes to the vegetable market

Raju went to a vegetable market. His mother told him to buy 3 kg of tomatoes. He calculated the money he had to pay for the tomatoes in the following way-

Rate Chart

1 kg tomatoes = ₹ 5

1 kg onions = ₹ 10

1 kg potatoes = ₹ 4

1 pack of spinach = ₹ 6

Cost of 1 kg tomatoes = ₹ 5

Cost of 2 kg tomatoes = ₹ 5 + ₹ 5 = ₹ 10

Cost of 3 kg tomatoes = ₹ 5 + ₹ 5 + ₹ 5 = ₹ 15

Is there any other way to find the cost?

Can he multiply 3 x 5 = 15?

Read the rate chart in above example and answer the following questions-

(A) If you want to buy 5 kgs of onions, how much will they cost?

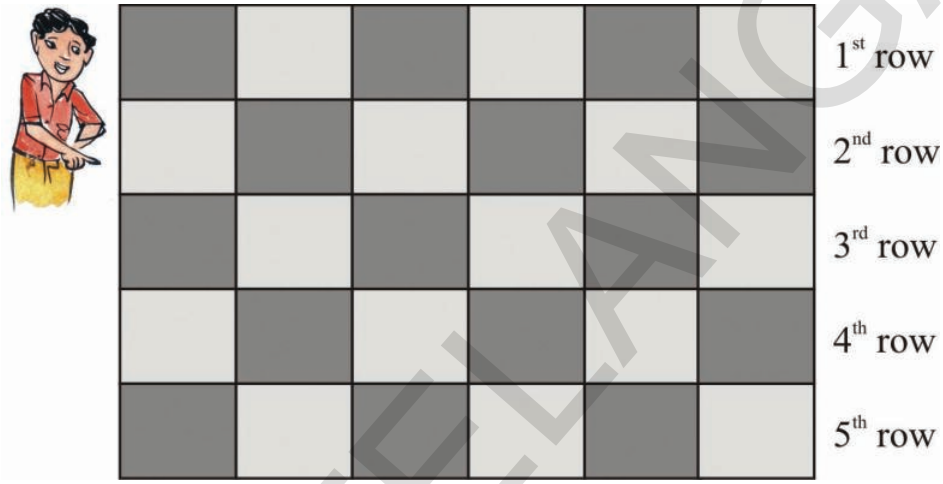
(B) How much will 4 kgs of potatoes cost?

(C) How much will 4 packs of spinach cost?

Tanisha counts the tiles in his classroom

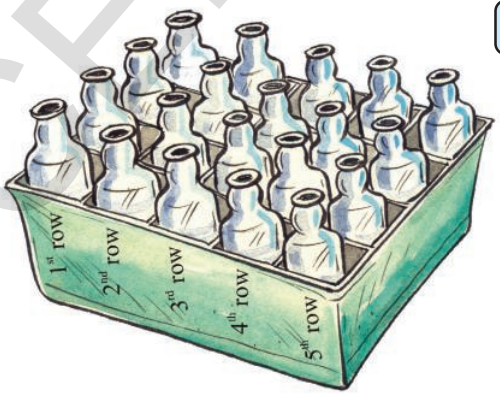
Tanisha started counting the tiles on her classroom floor, one by one. Her elder brother saw her doing so. He asked her, "Are the tiles in each row equal?" Tanisha answered, "Yes, there are 6 tiles in each row."

Her brother again asked her, "How many such rows are there?" Tanisha answered "There are 5 such rows."



Tanisha looked at the floor again and immediately said, "I do not need to count each tile. I can simply multiply, 5 x 6 = 30 tiles."

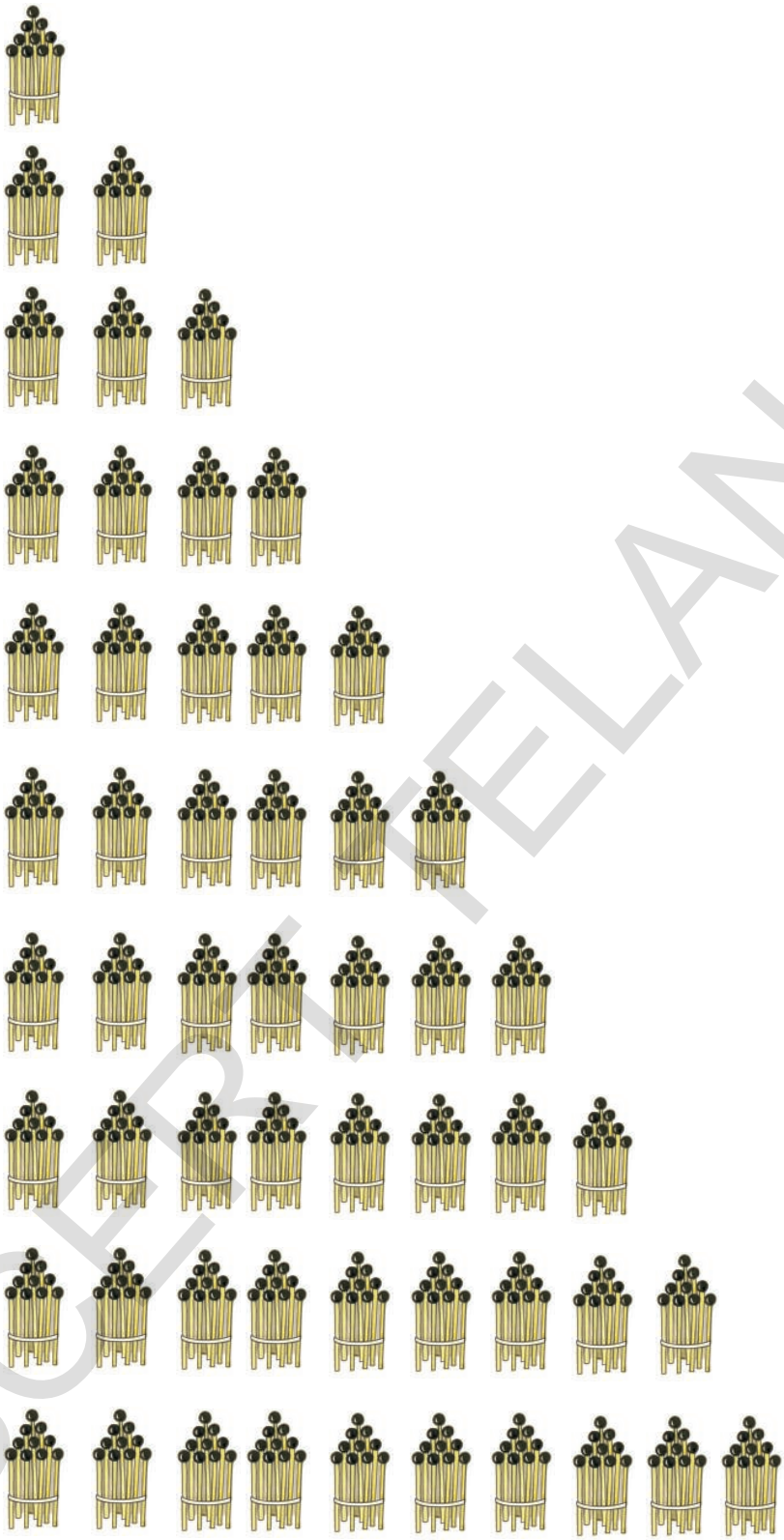
How many bottles are there?



☐ + ☐ + ☐ + ☐ + ☐ = ☐

☐ x ☐ = ☐

Let us construct the table of 10.



1 x 10 = 10

2 x 10 = 20

3 x 10 = 30

4 x 10 = 40

5 x 10 = 50

6 x 10 = 60

7 x 10 = 70

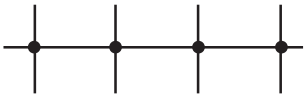
8 x 10 = 80

9 x 10 = 90

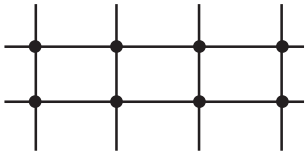
10 x 10 = 100

Let us construct the table of 4.

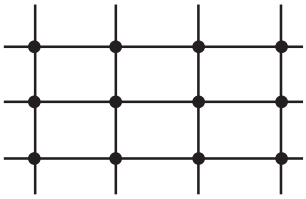
These are broom sticks arranged in the following way-



Number of joints 1 + 1 + 1 + 1 = 4 x 1 = 4



Number of joints 2 + 2 + 2 + 2 = 4 x 2 = 8



Number of joints 3 + 3 + 3 + 3 = 4 x 3 = 12

Continue to add more broom-sticks and construct the table of 4.

Try This

Construct tables of 2, 3, 5, 6, 7, 8, 9 using match-sticks or broom-sticks.

Buzz

Let children stand or sit in a circle. Ask children to speak aloud numbers, in a sequence. If you are playing with the table of 4 then every 4^{th}, 8^{th}, 12^{th}, 16^{th} child should say Buzz instead of a number. If he fails to say so, he will be out of the game. Continue to play this game till one child is left.

Multiplication with zero.

One zero	=	0	=	1 x 0 = 0
Sum of 2 zeroes	=	0 + 0	=	2 x 0 = 0
Sum of 3 zeroes	=	0 + 0 + 0	=	3 x 0 = 0
Sum of 4 zeroes	=	0 + 0 + 0 + 0	=	4 x 0 = 0
Sum of 5 zeroes	=	_____	=	_____

On multiplying any number with zero, we get _____.

Multiplication with one.

One	=	1	=	1
Sum of 2 ones	=	1 + 1	=	2 x 1 = 2
Sum of 3 ones	=	1 + 1 + 1	=	3 x 1 = 3
Sum of 4 ones	=	1 + 1 + 1 + 1	=	4 x 1 = 4
Sum of 5 ones	=	_____	=	_____

On multiplying any number with one, we get _____.

Are the answers same in each case?

3 x 2 = 6 2 x 3 = 6	4 x 5 = 20 5 x 4 = 20
3 x 4 = _____ 4 x 3 = _____	5 x 6 = _____ 6 x 5 = _____
1 x 7 = _____ 7 x 1 = _____	8 x 9 = _____ 9 x 8 = _____

Try the above with any two numbers of your choice.

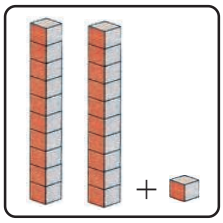
Multiplying bigger numbers

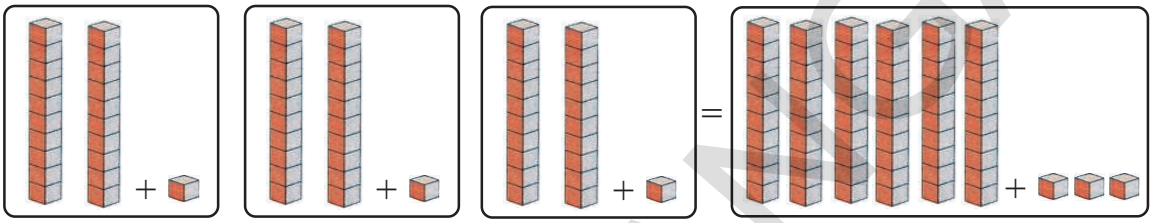
Let us multiply 3 x 21.

21 means = 20 + 1

There are 2 tens and one 1

3 x 21 = 21 + 21 + 21





20 + 1 20 + 1 20 + 1 60 + 3

You can also multiply like this:

20 + 1

60	3

x 3

60 + 3 = 63

This can also be done like this:

2	1
x	3
6	3

First multiply 3 with 1.

Then multiply 3 with 2.

3 x 1 ones = 3 ones = 3.

3 x 2 tens = 6 tens = 60.

Mona multiplied like this:

$$\begin{array}{r} 2\ 3 \\ \times\ 4 \\ \hline 8\ 1\ 2 \\ \hline \end{array}$$

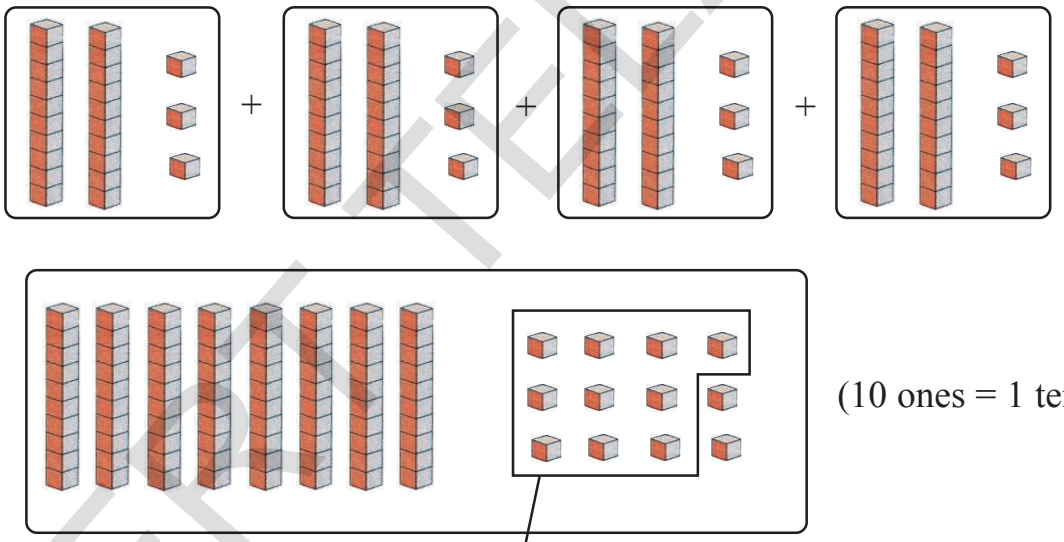
Here she has multiplied- $4 \times 3 = 12$ and $4 \times 2 = 8$

But this is not right. Let us check.

$23 \times 4 = 23 + 23 + 23 + 23$

$23 = 20 + 3$

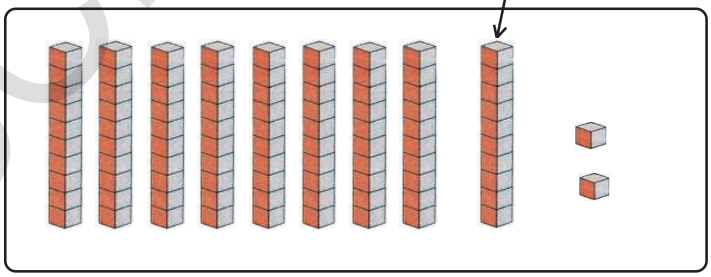
Thus, $20 + 3$ is added 4 times



=

(10 ones = 1 ten)

=



= 9 tens + 2 ones = 92

We can also multiply like this-

20 + 3

80	12	x 4

80 + 12 = 92

or take this-

$$\begin{array}{r} {\scriptstyle (1)} \\ 23 \\ \times\ 4 \\ \hline 92 \\ \hline \end{array}$$

First 4 x 3 = 12. 12 means 1 ten + 2 ones. Take 2 in ones place and carry 1 in tens place.

Then 4 x 2 = 8. 8 tens. Add 8 tens to the 1 ten which has been carried over. 8 tens + 1 tens = 9 tens or 90.

Do These

1. Multiply orally.

(A)	30 x 2	=		(B)	20 x 4	=	
(C)	60 x 3	=		(D)	195 x 0	=	
(E)	205 x 0	=		(F)	10 x 5	=	
(G)	625 x 1	=		(H)	819 x 1	=	
(I)	216 x 1	=		(J)	103 x 4	=	

2. Multiply as shown in the example given below.

Example : 43 x 2

40 + 3

80	6	x 2

80 + 6 = 86

(A) 32 x 3

30 + 2

		x 3

___ + ___ = ___

(B) 34 x 5

30 + 4

□□ x 5

___ + ___ = ___

(C) 25 x 4

20 + 5

□□ x 4

___ + ___ = ___

(D) 48 x 6

40 + 8

□□ x 6

___ + ___ = ___

(E) 52 x 4

□□

___ + ___ = ___

3. Multiply as shown in the example given below.

Example :

10	1
2	3
x	3
6	9

(A)

10	1
4	3
x	3

(B)

10	1
3	1
x	5

(C)

10	1
9	3
x	2

(D)

10	1
3	6
x	7

(E)

10	1
4	7
x	9

(F)

10	1
7	0
x	4

(G)

10	1
2	5
x	4

See this...

(A)

10	1
3	7
x	3

(B)

10	1
3	7
x	6

(C)

10	1
3	7
x	9

Multiplication in daily life

1. There are 5 autos. In each auto there are 4 people. How many people are there in the 5 autos?

   Ans. This means : 4 people + 4 people + 4 people + 4 people + 4 people.

   or 5 x 4 = 20

   There are 20 people in 5 autos.

2. 7 cotton seeds are planted in each row. There are 8 such rows in the field. How many total seeds are planted in the field?

   Ans. Each row contains 7 seeds

   Number of rows = 8

   Total number of seeds = 8 x 7 = 56

   A total of 56 seeds are planted.

3. Roja spends ₹ 5 each day. How much money does she spend in a week?

   Ans. Roja spends each day = ₹ 5

   Days in a week = 7

   Money spent in a week = 7 x 5 = 35

   Roja spends ₹ 35 in a week.

The word 'twice' means 2 times. Twice of 5 means 2 x 5

The word 'thrice' means 3 times. Thrice of 5 means 3 x 5

4. Surya's age is twice that of Ramya.

Ramya is 9 years. What is Surya's age?

Ans. Ramya's age = 9 years

Surya's age = Twice Ramya's age

= 2 x Ramya's age

= 2 x 9

= 18

Surya's age is 18 years

Try These

1. There are 65 mangoes in a box. How many mangoes are there in all in 8 such boxes?

2. The bus fare from Nalgonda to Vijayawada is ₹ 93 for one person. How much money is needed for 5 persons to travel?

3. Ravi has ₹ 20. Madhu has 3 times Ravi's money. How much money does Madhu have?

4. Suresh can read 12 pages of a book each day. He read for 4 days. How many pages did he read in 4 days?

5. 9 children are standing in each row and there are 7 such rows. In all how many children are standing in the 7 rows?

6. A frog jumps 8 steps in each jump. It jumped 9 times in the same way. How many steps did the frog cover?

7 DIVISION

Let us play a game- How many laddoo's has Mama given you?

Ask children to stand in a circle. Then ask them to run in the circle. Teacher says aloud "How many laddoo's has Mama given you?" Students answer" as many as you say." Teacher calls out "four." Then children run around to make groups of 4. The groups having more or less than 4 children will be out of the game. One should keep number of children in mind when calling out the number.

If the total number of children playing the game is 24 then how many groups will be formed?

Complete the table accordingly-

Students to be formed into groups	Students in each group	Number of groups formed
24	3	8
24	6	
24	8	
24	2	

(A) How many groups of three will be formed?

(B) What is the minimum number of groups formed?

(C) How many groups can be made with six students in each group?

(D) What is the maximum number of groups formed?

In another class there are 32 children.
Now complete the table accordingly-

Students to be formed into groups	Number of groups formed	Students in each group
32	16	2
32	8	
32	4	
32	2	

(A) How many children are there in each group when the highest number of groups are formed?

(B) If children are divided into 8 equal groups, how many children will be there in each group?

(C) If 4 equal groups are formed how many children will be there in each group?

(D) If 2 equal groups are formed , how many children will be there in each group?

How many in each group?

1. Laddoos and plates

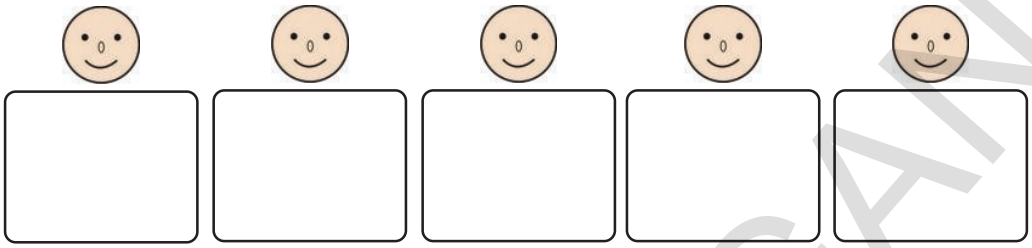
There are 12 laddoos in a plate. Keep them equally in two plates.

Now, howmany laddoos are there in each plate?

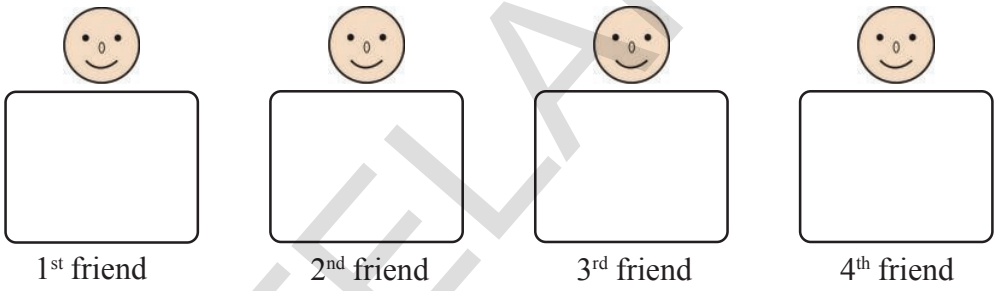
Now keep 12 laddoos in three plates equally. How many will be there in each plate?

If 12 laddoos are kept in four plates equally. How many will be there in each plate?

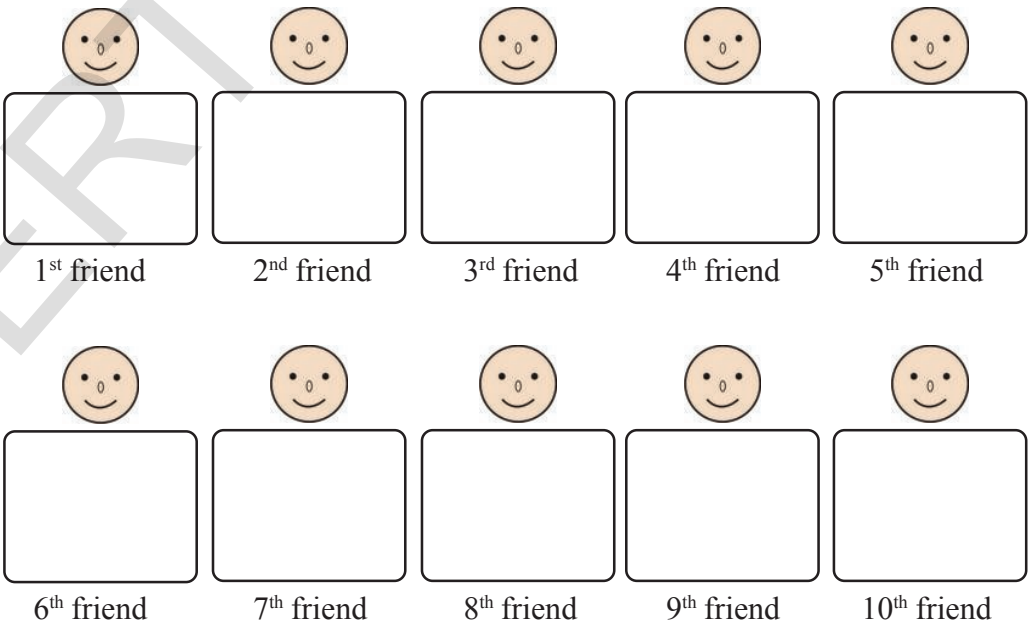
2. I have 20 toffees. I want to distribute them equally among my 5 friends. How many toffees does each friend get?



If I divide 20 toffees equally among 4 friends, how many toffees does each friend get?

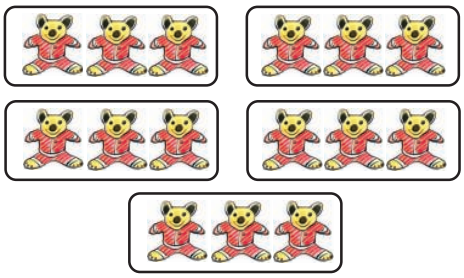


If I divide 20 toffees equally among 10 friends, how many toffees does each friend get?



How many groups?

1. Dharmendra has 15 toys. He wants to keep them in boxes. If he puts 3 toys in each box, how many boxes are needed?

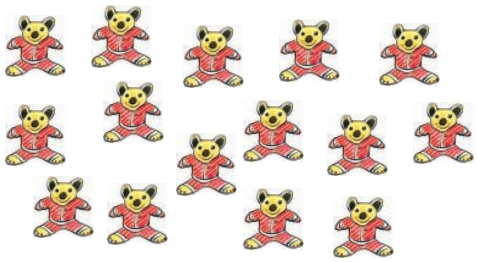


There are **15** toys

There are **3** toys in each box

So, **5** boxes are needed.

If Dharmendra puts 5 toys in each box, how many boxes are needed?

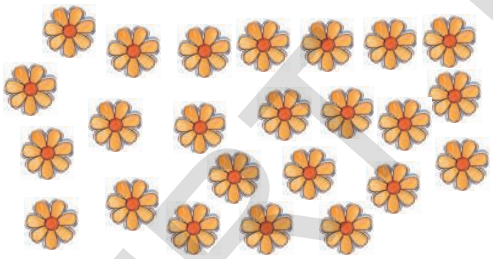


There are _____ toys

There are _____ toys in each box

So, _____ boxes are needed.

2. Radha has 24 flowers. She gives 6 flowers to each of her friends. Then to how many friends does she give?

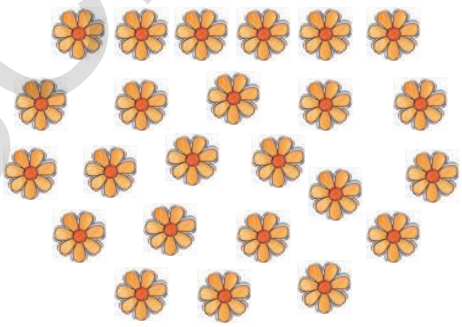


There are _____ flowers

Flowers given to each friend _____

So, the number of friends she gives flowers is _____

If Radha gives 4 flowers to each of her friends, then to how many friends does she give?



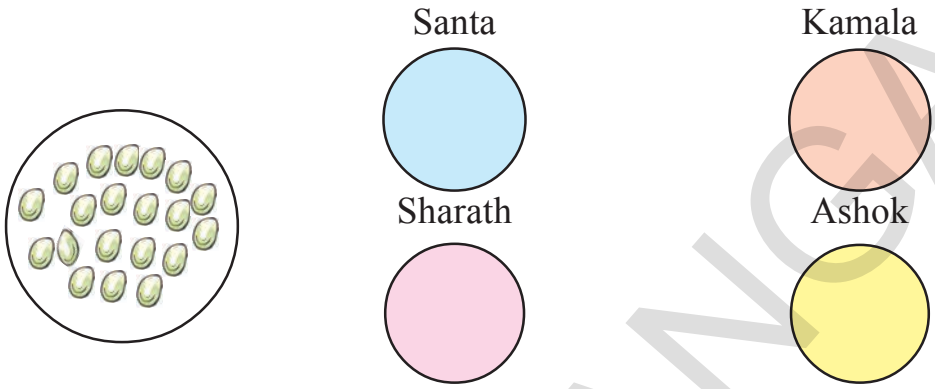
There are _____ flowers

Flowers given to each friend _____

So, the number of friends she gives flowers is _____

Division

Division means distributing into **equal parts**. Distribute the 20 marbles given in the circle equally among 4 friends.



This is what Shalini does. She picks up a marble and puts it in Santa's circle. Then she puts a marble in Kamala's circle, then in Sharath's and then the 4th marble in Ashok's circle.

After giving one-one marble to each friend she starts distributing again. She keeps repeating this process till all the marbles in the big circle are distributed.

When 20 marbles are distributed among 4 friends, each one gets 5 marbles. This is written as 20 ÷ 4 = 5.

' ÷ ' is the symbol we use for division.

Try This

1. How can you distribute 12 marbles among 3 children? Also write this using the ' ÷ ' symbol.
2. Do these divisions using marbles.

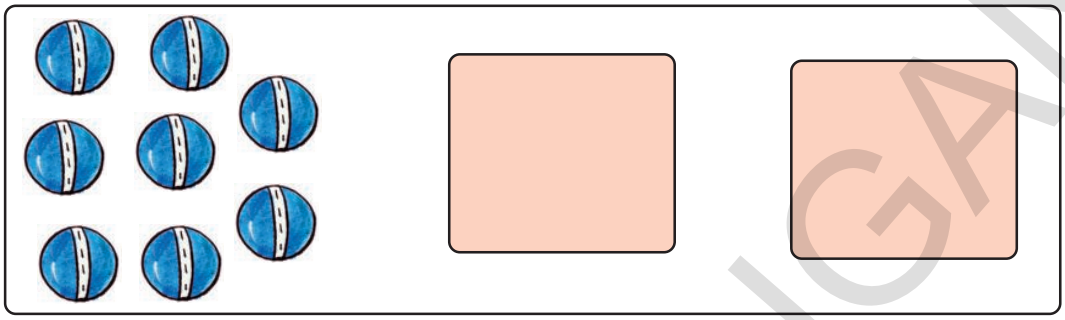
(A) 24 ÷ 3 (B) 15 ÷ 5

(C) 14 ÷ 2 (D) 12 ÷ 4

(E) 56 ÷ 7 (F) 42 ÷ 6

We can also repeatedly subtract to divide equally-

If we are distributing 8 balls into equal groups of 4, we will continue to subtract 4 balls till, all the balls are distributed-



Total balls are	8
First time taking away balls	– 4
Remaining balls	4
Second time taking away balls	– 4
Remaining balls	0

This is written as $8 \div 4 = 2$

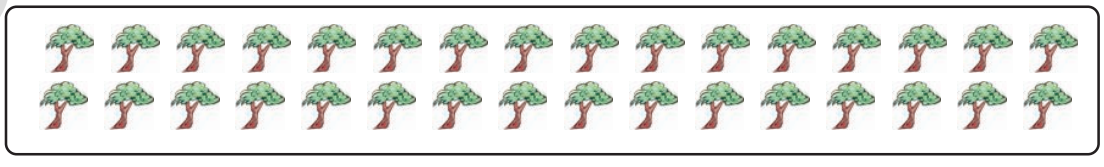
This can also be shown as

$$4 \overline{)\,8\,(\,2} \quad \underline{8} \quad 0$$

8 is dividend
4 is divisor
2 is quotient
0 is remainder

Try This

Ramaiah brought 32 plants to plant in his garden. If he plants 8 in each row, how many rows are formed?



Let us see in how many rows

1st row		32 – 8 = 24
2nd row		24 – 8 = 16
3rd row		16 – 8 = 8
4th row		8 – 8 = 0

So when 8 plants are planted in each row we get 4 rows.

This is written as 32 ÷ 8 = 4

If Ramaiah wants to plant 4 plants in each row, how many rows would there be?

Number of plants	32
Planted in 1st row	– 4
Remaining plants	28
Planted in 2nd row	– 4
Remaining plants	.....
Planted in 3rd row	– 4
Remaining plants	.....
Planted in 4th row	– 4
Remaining plants	.....
Planted in 5th row	– 4
Remaining plants	.....
Planted in 6th row	– 4
Remaining plants	.....
Planted in 7th row	– 4
Remaining plants	4
Planted in 8th row	– 4
	0

So 8 rows are formed. This is written as $32 \div 4 = 8$

This can also be done as follows-

$$4 \overline{)\,32\,(8}$$
$$-32$$
$$\overline{0}$$

32 is dividend
4 is divisor
8 is called quotient
0 is remainder

Now let us use units and tens to divide-

Let us divide 48 marbles among 4 people.

Now 48 means 40 + 8 i.e. 4 tens and 8 ones.

When we divide 4 tens by 4 we get 1 ten = 10

When we divide 8 ones by 4 we get 2 ones = 2

Each person would get 10 + 2 = 12 marbles. This is represented as $48 \div 4 = 12$

This division can also be done as follows:

	10	1
	1	2
4)	4	8
	4	↓
	0	8
		8
		0

This means $48 \div 4 = 12$

Example:

Find 39 ÷ 3 = ?

```
        10   1
         1   3
      ------------
   3 ) 3   9
       3
      ------------
       0   9
           9
      ------------
           0
```

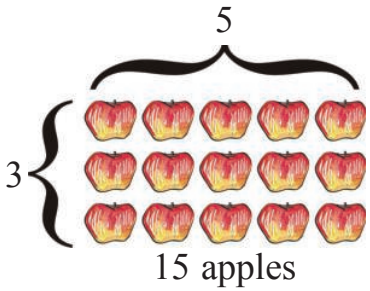
This means

```
            1 ten  + 3 ones
        ------------------------
   3 )  3 tens + 9 ones
        3 tens
        ------------------------
        0 tens + 9 ones
                 9 ones
                ---------
                 0 ones
```

Do This

(A)	30 ÷ 2	(B)	48 ÷ 4	(C)	45 ÷ 3
(D)	81 ÷ 9	(E)	60 ÷ 2	(F)	66 ÷ 6
(G)	86 ÷ 2	(H)	25 ÷ 5	(I)	36 ÷ 3
(J)	32 ÷ 4	(K)	35 ÷ 5	(L)	40 ÷ 4

Relation between division and multiplication



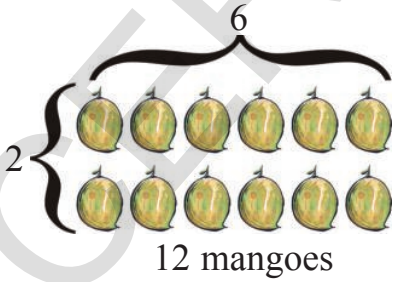
Multiplication	Division
3 Groups of 5 make 15 3 x 5 = 15	So 15 divided by 3 is 5 15 ÷ 3 = 5
and also :	
5 groups of 3 make 15 5 x 3 = 15	So 15 divided by 5 is 3 15 ÷ 5 = 3

You can see from above that multiplication and division are related. Every multiplication can be written in the form of division and every division can be written in the form of a multiplication.

Try These

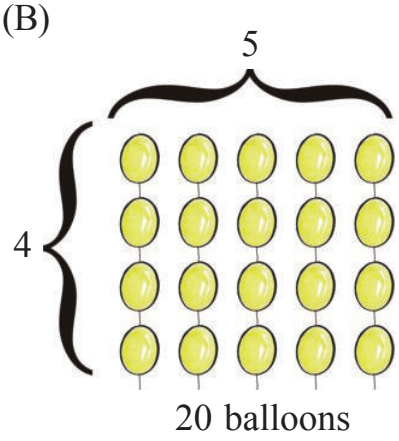
1. Observe the picture and write division and multiplication statements.

(A)



Multiplication	Division

(B)



Multiplication	Division

Do This

1. Fill the blanks.

Division	Multiplication
12 ÷ 2 = 6	6 x 2 = 12
12 ÷ 6 = 2	2 x 6 = 12
18 ÷ 3 = 6	6 x 3 = 18
18 ÷ 6 = 3	3 x 6 = 18
20 ÷ 4 = ☐	☐ x 4 = 20
☐ ÷ 8 = 2	2 x 8 = ☐
15 ÷ ☐ = 5	5 x ☐ = 15
☐ ÷ ☐ = 2	2 x ☐ = ☐

2. Fill the empty boxes and make two more.

Multiplication facts	Division forms
4 x 3 = 12	12 ÷ 3 = 4 12 ÷ 4 = 3
8 x 2 = 16	16 ÷ ☐ = 8 16 ÷ ☐ = 2
5 x 4 = ☐	20 ÷ ☐ = 5 20 ÷ ☐ = 4

Do these divisions

3. (A) 4) 44 ((B) 3) 18 ((C) 6) 24 (

(D) 2) 28 ((E) 5) 30 ((F) 4) 40 (

Do This

1. There are 50 children in class 5. They are divided into groups of 5. How many groups are formed?
2. Harish has 36 toffees with him. He wants to divide them equally among 6 children. How many toffees does each child get?
3. In a class there are 28 children. A Kabaddi team can be made with 7 members. How many Kabaddi teams can be made?
4. If ₹ 68 is distributed among 4 children, how much money will each child get?

8 MEASUREMENT

Ramana went to a shop. He asked the shopkeeper to give him 10 cubits of rope. The shopkeeper measured the rope with her hand and gave it to Ramana. Ramana doubted the measurement. He measured with his hand and found the rope to be 8 cubits long. He said, "this is not 10 cubits of rope." The shopkeeper replied, "But, I gave you 10 cubits." They began to argue.

How can you solve this problem?

Let's measure the length of a blackboard-

Measure the length of your classroom blackboard with your hand-span. Ask any 3 of your friends to measure the same with their hand-span. Then ask your teacher to do the same.

Write the measurements in the following boxes.

(A) Your measurement ____ handspans

(B) 1st friend's measurement ____ handspans

(C) 2nd friend's measurement ____ handspans

(D) 3rd friend's measurement ____ handspans

(E) Your teacher's measurement ____ handspans

You will find that all these measurements are not exactly the same.

Standard Instruments

Take a new pencil which is not sharpened. Measure the length of blackboard with the pencil. Ask your friends to also measure the blackboard with the same kind of pencil.

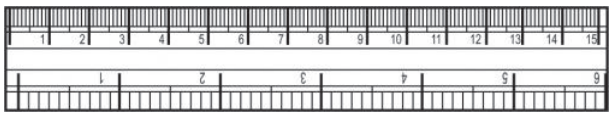
What do you observe?

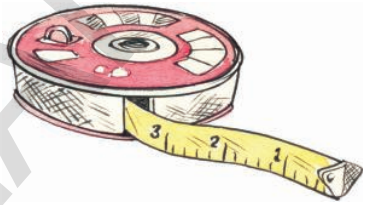
Did all of you get the same measurement with the pencil?

You must have.

Thus, if all of us use the same instrument to measure length, there will be no difference in the measurements.

Standard instruments like Scale, Tape etc. are used to measure length.

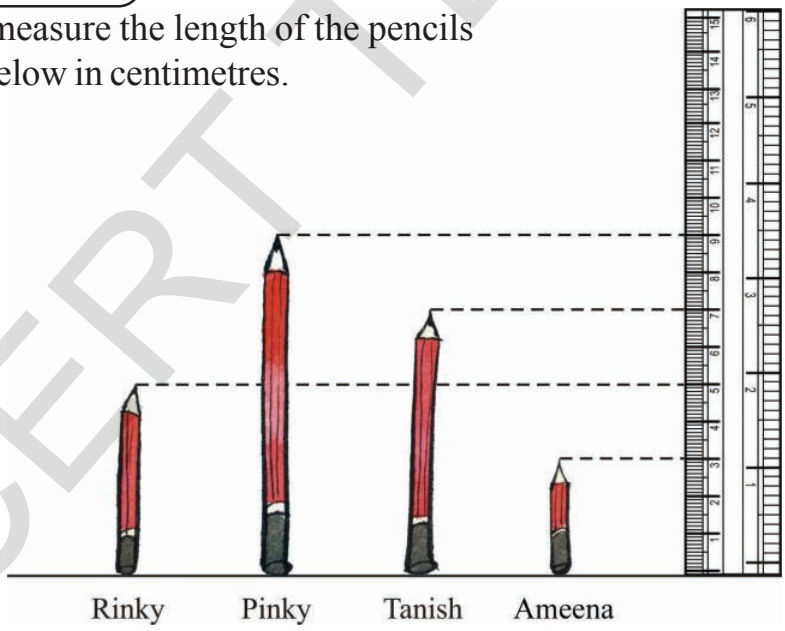




A scale is used to measure length in centimetres and inches.

Try These

Let us measure the length of the pencils given below in centimetres.



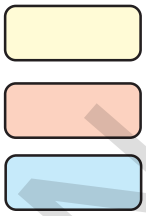
What is length of Rinky's pencil?

What is length of Ameena's pencil?

What is length of Tanish's pencil?

Is Rinky's pencil longer than Ameena's pencil?

By how much?



cm. is the short form of centimetre.

Do This

1. Measure the objects given in the table using a scale.

S. No.	Name of object	Length
1.	Pen	
2.	Chalk	
3.	Eraser	
4.	Duster	
5.	Pencil	

Activity-1

A visit to the tailor's shop

Go to a tailor's shop near your house and observe how the tailor measures the length of cloth.

How much does the bag weigh?

Ramu lifted the first bag very easily. But he found it difficult to lift the second bag. Why?

What objects are heavy for you?

Which of the following objects can you lift?

Can be lifted	Can not be lifted

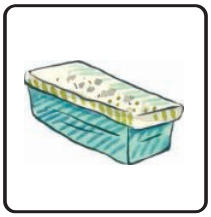
Which is heavy? Which is light?

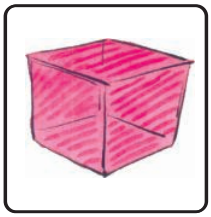
1. Put (✓) mark against the heavier one.

(A)

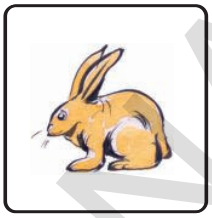
(B)

(C)





(D)



2. Put (✓) mark against the lighter one.

(A)

(B)

(C)

(D)

Standard Weights

Have you seen objects like those given below in a grocery shop or with a vegetable vendor?

Such weights help shopkeepers in weighing things, while selling them. Try holding the ones that weigh 1 kg and 2 kg.

Try These

1. A shopkeeper has only 1 kg, 2 kg, 5 kg and 10 kg weights with him. He will weigh articles with these weights only. Select the combination of these weights to weigh for buying the articles given below-

Articles to buy	Weights used to weigh
2 kg of tamarind	
1 kg of groundnut	
3 kg of sugar	
6 kg of onions	
7 kg of wheat flour	
13 kg of rice	

Estimating weights

2. Collect objects given below. Hold them and estimate their weights. Then check by actually weighing them.

Object	Estimated weight	Actual weight	Difference between estimated and actual weights
A packet of salt			
A cricket bat			
Your friend's school bag			

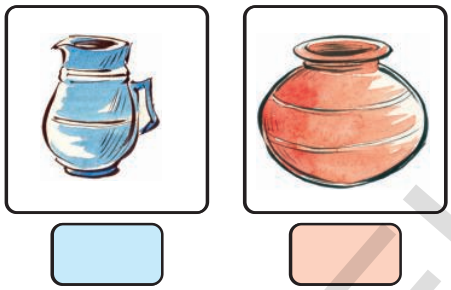
How much water can this bucket hold?

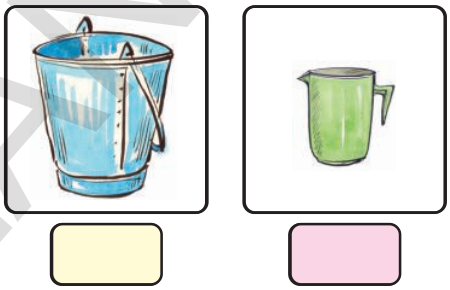
Sudha was pouring water into the bucket with a mug. Her younger brother came along and asked her to pour the water back into the mug and give empty bucket. Sudha told him that was not possible.

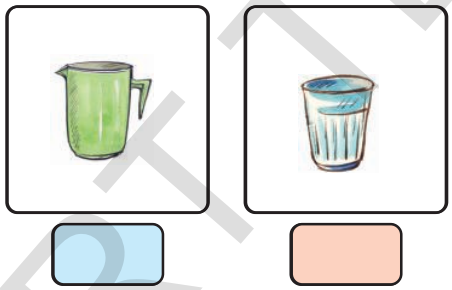
Why is it not possible?

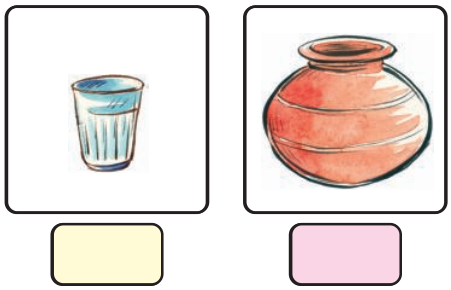
Which vessel holds more water?

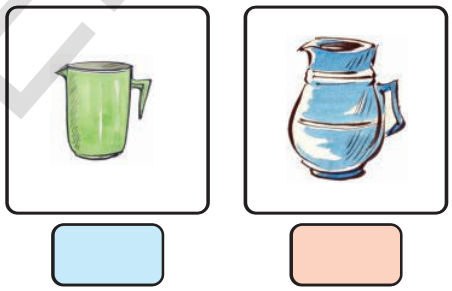
1. Put (✓) mark against the vessel that holds more water.

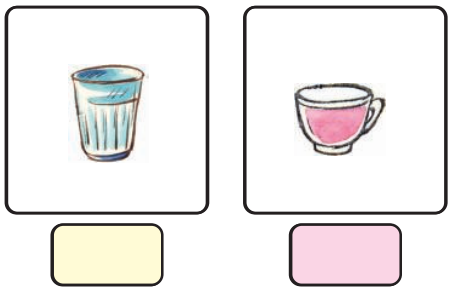
(A) 

(B) 

(C) 

(D) 

(E) 

(F) 

How much water can a vessel hold?

Get a bucket, a pot, a jug, a mug and a glass.

Fill the bucket with water using the jug. How many jugs of water were needed to fill the bucket? Now, fill the bucket with water using a mug and then a glass. Count how many mugs and how many glasses of water were needed to fill the bucket?

Repeat this activity with a pot in place of the bucket.

Fill the table accordingly-

	Number of 	Number of 	Number of 
			
			

Look at the table. Answer the following questions-

How many jugs of water can be held by the pot?

How many mugs of water can be held by the bucket?

How many glasses of water can be held by the bucket?

How many glasses of water can be held by the pot?

Which vessel holds more water? Bucket / pot

The quantity of liquid a vessel can hold is called the capacity of the vessel.

Try These

1. Rinky poured 3 glasses of water to fill a vessel. Bunty poured 5 glasses of water to fill another vessel. What is the capacity of the two vessels in terms of glasses?
2. A tank can be filled with 28 pots of water. Kamal poured 19 pots of water. How many pots of water are needed to fill the tank?
3. Tanish poured 15 pots of water in a tank. Pinky then poured 17 pots of water to fill the tank. What is the capacity of the tank?
4. A vessel can hold 32 cups of tea when it is completely filled. Isha has taken out 17 cups of tea from the vessel. How many cups of tea is remaining in the vessel?
5. A glass can be filled with 3 cups of water and a vessel can be filled with 4 glasses of water. What is the capacity of the vessel in terms of cups?
6. A tank can be filled with either 9 pots of water or 72 jugs of water. How many jugs of water are needed to fill a pot?

What is a Litre?

So far we have used glasses, mugs, jugs etc. to measure the capacity of buckets, pots and tanks. However, glasses, mugs, jugs etc. come in different sizes. We need a standard unit to measure liquids.

The standard unit used to measure liquids is Litre.

Activity-2

Visit a nearby grocery shop. See how the shopkeeper measures oil, while selling it.

Do This

When you go to the market observe the packets of these items. Note the capacity written on each packet. Is the capacity expressed in litres?

Different shapes, equal capacity

Mahesh and Anu's mother gives them milk everyday in different shape of glasses. Mahesh thought that his mother gives him less milk.

Anu's glass

Mahesh's glass

Do you think so?

One day Mahesh's teacher showed like this in class.

He took water in a glass.

He poured the water in different shaped glasses. They looked like this-

He explained, "When we pour the same quantity of a liquid in glasses of different shapes (one taller one and a shorter one), it may look like that there is more liquid in one and less in the other. However, this is not true. If the same amount of liquid has been poured into the glasses, their quantity remains the same in both glasses."

9 TIME

Look at the pictures given below. Arrange them in the order in which they occur in the day. The first one has been done for you.

1

Which activity takes more time?

Some pairs of activities are given below. Compare them and state which takes more time and which takes less time. Fill the boxes with More or Less accordingly.

(A)

(B)

(C)

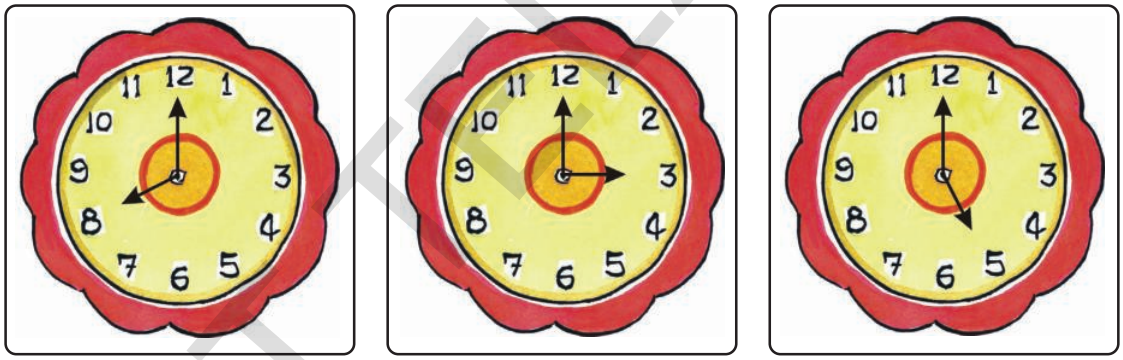
What is the time?

Hi! I am a clock. I tell you what time it is. You can see the numbers 1 to 12 written on me. I also have 2 hands. The short hand is called the 'hours hand' and the long hand is called the 'minutes hand'. Both my hands move but with different speeds. The hour hand is slower than the minutes hand.

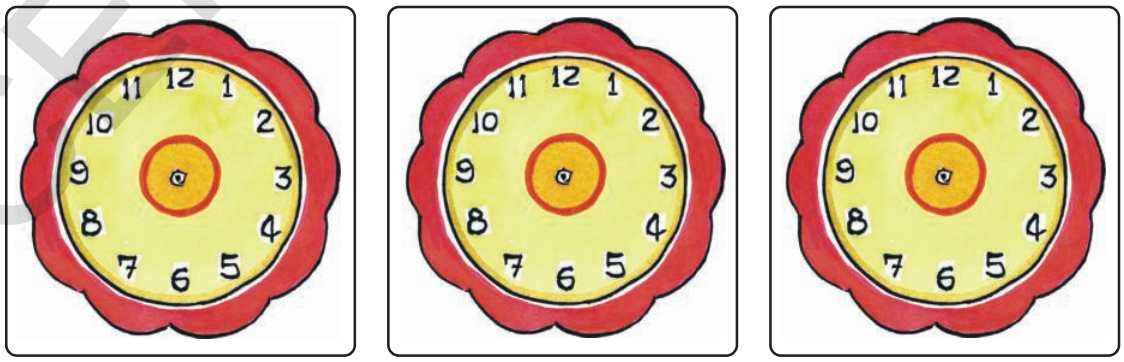
When the hours hand is at 3, it is 3 o'clock. When the hours hand is at 7, it is 7 o'clock. When the hour hand is at 9, what is the time? Notice that in all these situations the minutes hand is at 12.

Try These

1. What is the time in the clocks given below?



2. Show the time in clocks given below.



11 o'clock | 2 o'clock | 12 o'clock

Do This

What do you do in a Day?

1. At what time, do you:

   wake up in the morning? _____

   go to school? _____

   have lunch in the afternoon? _____

   come back home from school? _____

   have dinner in the night? _____

   sleep? _____

2. Anitha is going to her uncle's home. She started at 9 o'clock in the morning. She reached her uncle's home at 12 o'clock. How much time did she take to travel?

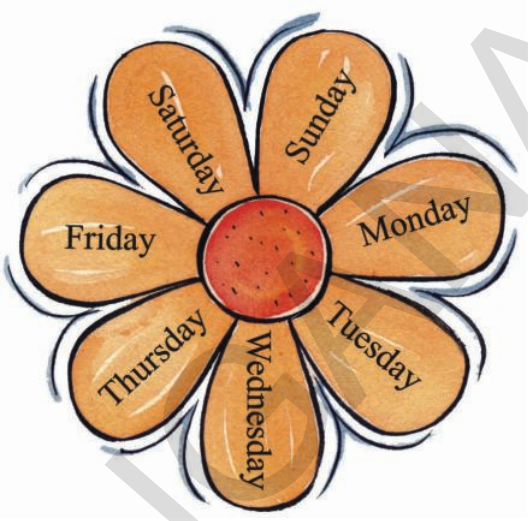
3. Vinoda started playing at 4 o'clock in the evening. She played for 2 hours. At what time did she stop playing?

4. Rachana started watching TV at 11 o'clock in the morning. She watched TV for 3 hours. At what time did she stop watching TV?

5. Gouri studied for 5 hours. She stopped studying at 4 o'clock in the evening. At what time did Gouri start studying?

6. A tank can be filled in 2 hours. If I start filling the tank at 9 o'clock then at what time the tank will be filled?

The seven days in a week



What is the day today?

_____

What will be the day tomorrow?

_____

How many days are there in a week?

_____

What is the first day in a week?

_____

What is the last day in a week?

_____

On which day do you have a holiday?

_____

Write names of the days of a week.

_____ _____

_____ _____

_____ _____

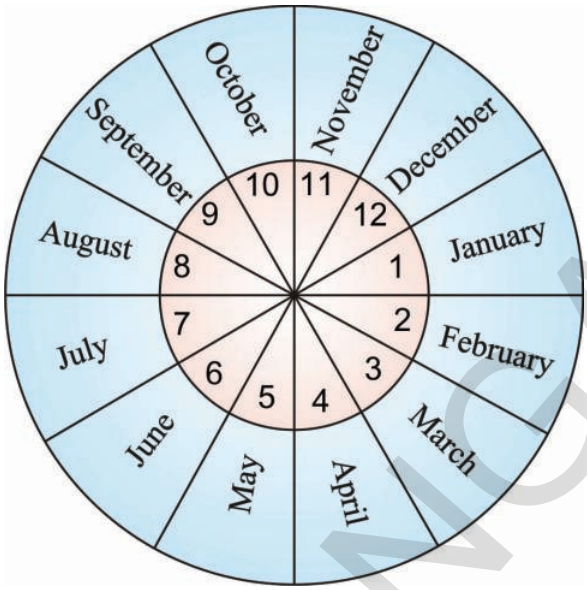
_____

Try These

Match the following.

(A)	Sunday	Comes before Saturday and after Thursday
(B)	Monday	Comes after Wednesday and before Friday
(C)	Tuesday	Comes between Friday and Sunday
(D)	Wednesday	Comes between Monday and Wednesday
(E)	Thursday	Very next day of Sunday
(F)	Friday	Is generally a holiday
(G)	Saturday	Comes before Thursday and after Tuesday

The 12 months in a year



How many months are there in a year?

_____

Which is the first month of a year?

_____

Which is the last month of a year?

_____

When do you celebrate Independence Day, every year?

_____

When do you celebrate Republic Day, every year?

_____

Write the names of the months of a year.

Now let's read the calendar of the year-2011

CALENDAR-2011

January

S	M	T	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

February

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

March

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

April

S	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

May

S	M	T	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

June

S	M	T	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

July

S	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

August

S	M	T	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

September

S	M	T	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

October

S	M	T	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November

S	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

December

S	M	T	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Carefully look at the calendar and answer the following questions.

(A) How many days are there in January? : _____

(B) How many days are there in June? : _____

(C) How many days are there in February?: _____

(D) List the months which have 31 days?

_____ _____

_____ _____

_____ _____

_____

(E) List the months which have 30 days?

_____ _____

_____ _____

(F) Encircle 12th January (Swamy Vivekananda's birthday) in the calendar.

Do with the calendar of October, 2011.

October, 2011

S	M	T	W	Th	F	Sa
						1
		4				
				13		
16					21	
	24					
30						

(A) Colour the Sundays in red.

(B) Encircle Gandhi Jayanti.

(C) How many Sundays are there in the month? ____

(D) How many Fridays are there in the month? ____

(E) 5th is a Wednesday. The next Wednesday falls on ____

(F) Last day of the month- Date:____ Day:_____

(G) After the last day of the month the next date is ____/___/_____

Activity-1

Take any four dates from the calendar in the form of a square. Add them as shown below. Observe the result.

Sunday	4	11	18	25
Monday	5	12	19	26
Tuesday	6	13	20	27
Wednesday	7	14	21	28
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	31

1 8
2 9

2 + 8 = _____

1 + 9 = _____

13 20
14 21

14 + 20 = _____

13 + 21 = _____

23 30
24 31

_____

_____

What do you observe? : _____

Try This

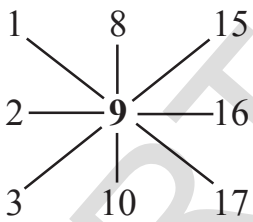
Look up a calendar of the year. See if your observation is true for the different months.

Activity-2

Take any nine dates from the calendar in the form of a square. Add them as shown below. Observe the result.

Sunday	4	11	18	25
Monday	5	12	19	26
Tuesday	6	13	20	27
Wednesday	7	14	21	28
Thursday	1	8	15	22	29
Friday	2	9	16	23	30
Saturday	3	10	17	24	31

Example :

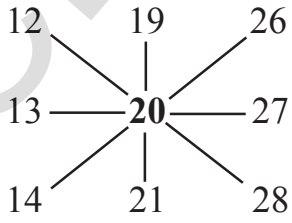


(A) 3 + 9 + 15 = _____

(B) 2 + 9 + 16 = _____

(C) 1 + 9 + 17 = _____

(D) 8 + 9 + 10 = _____



_____

_____

_____

What do you observe? : _____

10 DAY-TO-DAY MATHS

Look at the following situations. Are the people involved in these situations using Maths. If so, how?

Prashant gets up at 7 AM. It takes him 5 minutes to walk to the bus stop. The school bus arrives at 7:50 AM. How much time does he have to get ready for school?

Richa notices that there are equal number of seats on each side of the bus. She also notices that there are an equal number of seats in each row. Richa counts 12 seats on each side. How many seats are there in each row? How many seats are there in all?

Ramesh has been selling bananas since morning. He had 320 bananas. By evening he has 54 left with him. How many bananas did Ramesh sell?

Sarojini takes 25 minutes for cooking rice, 20 minutes for cooking curry and 15 minutes for rasam. If she has to serve food at 8:00 o'clock, at what time should she enter the kitchen?

Now can you think of some situations where you use maths in your daily life?

Kid's Toy Shop

1. Carefully look at the picture given below. Some toys along with their prices are given.

You have ₹ 50 with you. Select any 3 toys which you would like to buy such that you spend all the money.

Name of toys	Spent money
Example : aeroplane + duck + ball	₹ 50

Making toys with clay

2. Sudheer wants to make a toy elephant, a toy cat and a toy rat with clay. The elephant needs 5 kg clay, the cat needs 3 kg and the rat needs 1 kg. How much clay is needed to make all the toys?

Toys	Clay needed
	kg
	kg
	kg
	kg

Total clay =

Make more problems like the ones given above.

Cost of Riya's Ribbons

3. Riya went to market to buy ribbons of 3 colours. She bought 3 blue ribbons, 5 red ribbons and 10 green ribbons.

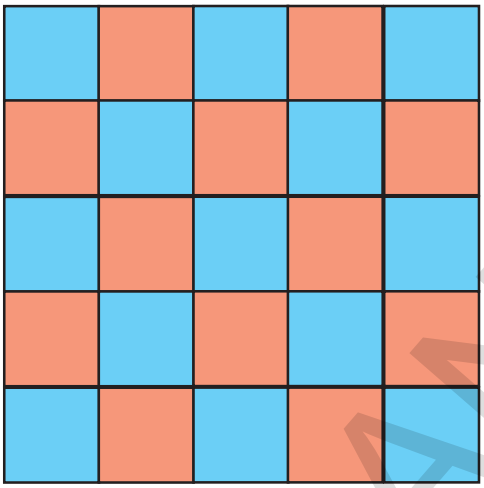
Ribbons	Cost of each ribbon
	
	
	

How much money did Riya pay in the shop?

Santosh's classroom

4. Santosh is looking at the floor of his classroom. He is counting the number of tiles used for flooring. Can you help Santosh in counting the tiles?

1st Row →
2nd Row →
3rd Row →
4th Row →
5th Row →



Answer the following questions based on the above picture-

(A) How many tiles are there in each row?

(B) How many rows are there?

(C) What is the total numbers of tiles?

(D) How many blue tiles are there?

(E) How many red tiles are there?

Surya went to Village

5. Surya went to his grand father's village on bicycle. It took him 1 hour to reach the village. On return, he walked for 3 hours and reached home. What is the total time spent by Surya on travelling?

Distance	**Time taken**
Home to grand father's village	:
Return to home	:
Total time taken	:

If Surya walks on both sides then how much time will he take?

Shikha goes to her grand mother's village

6. (A) Shikha has to go to her grand mother's village. Her bus will leave at 9 AM. It will take 3 hours to reach the village. At what time will Shikha reach the village?

(B) When Shikha reached the bus stand, she came to know that her bus had been delayed by 2 hours. Now at what time will she reach the village?

(C) Make more problems in situations which involve time and solve them.

Seema prepares tea

7. Seema prepares very good tea. She uses 2 spoons of sugar for a cup of tea. Today, four guests have come to her house. She had to prepare tea for her mother, father and the guests.

   (A) How many cups of tea need to be prepared?

   (B) How many spoons of sugar would be needed?

Riya washes clothes

8. (A) Harish and Kavita filled a tank with water in their house.

Harish brought	27	litres
Kavita brought	23	litres
Capacity of the tank		litres

(B) Riya used water from the tank to wash clothes. There is 37 litres of water remaining in the tank. How much water did she use?

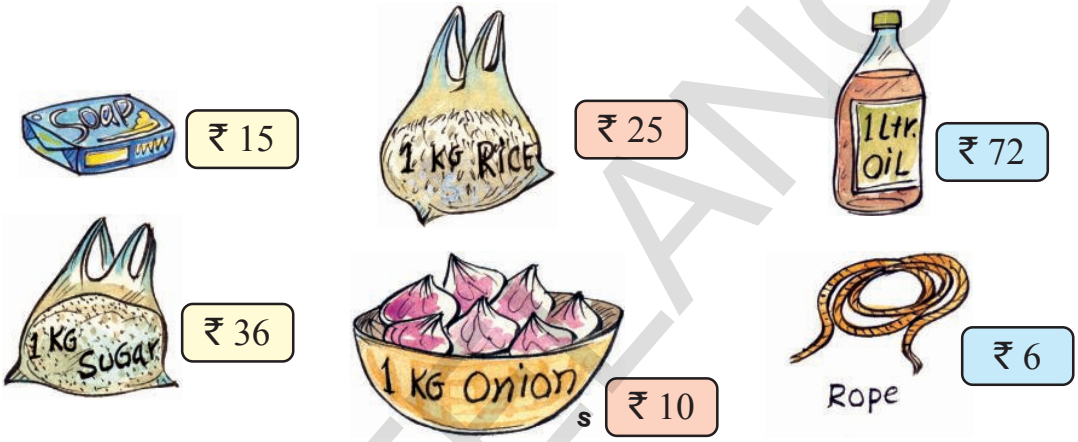
Milk consumed in the hostel

9. (A) Students in a hostel consume 24 litres of milk daily. How much milk is consumed in the hostel in a week?

   (B) If each student consumes 2 litres of milk in a week, how many students are there in the hostel?

The shopkeepers bill

10. Sujit went to the market. He bought 6 soaps, 1 kg of sugar, 4 kg of onions, 10 kg of rice, 2 litres of groundnut oil and 5 ropes.



Help the shopkeeper make the bill.

S. No.	Article	Price of Unit Quantity	Quantity	Total Price
1.	Soap			
2.	Sugar			
3.	Onions			
4.	Rice			
5.	Groundnut oil			
6.	Rope			
			Total	

Do This

1. Go to a stationary shop. Ask the price of the following items-

   6 pencils, 3 erasers, 2 sharpeners, 10 notebooks, 5 scales and 4 pens. Prepare a rate chart.

2. Rajni has 12 laddoos with her. She distributed them equally among Richa, Shalini and Preeti. How many laddoos did each one get?

3. There are 12 rows of rose plants in a garden. In each row there are 6 rose plants. How many rose plants are there in the garden?

4. 96 cm of thread is divided into 6 equal parts to make garlands. What will be the length of each garland?

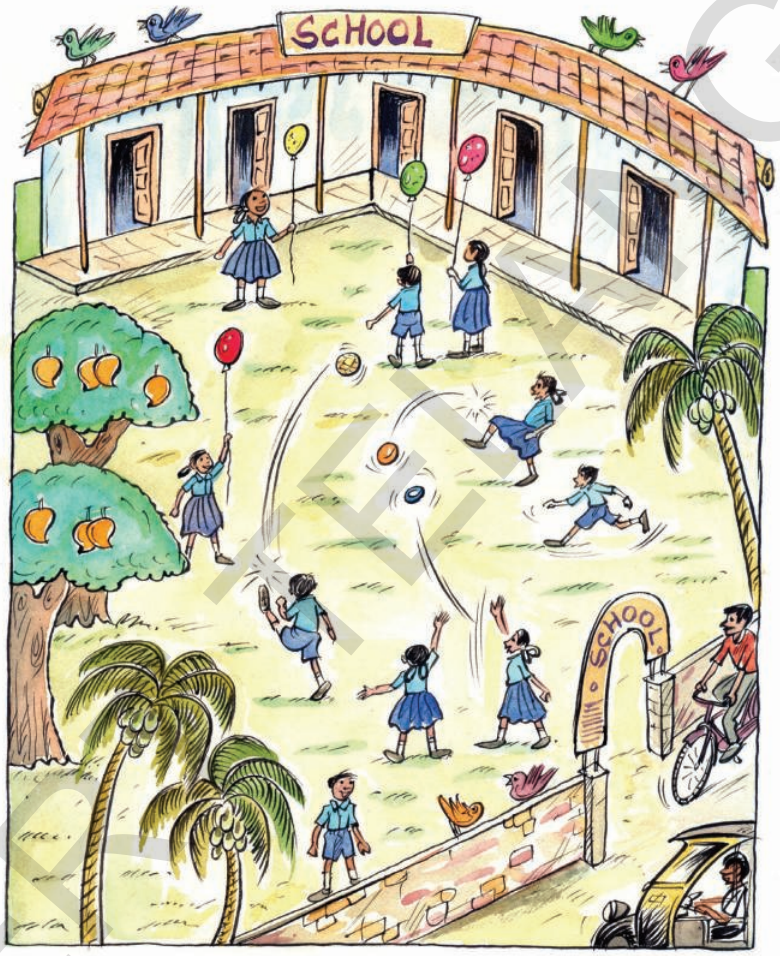
5. Dhoni consumes 3 litres of milk daily. How much litres milk will he consume in 30 days?

6. Mahesh earns ₹ 375 daily. He spends ₹ 200 on each day. How much money does he save in a day?

7. Seema studies for 3 hours everyday. How much time will she study in a week?

11 DATA HANDLING

1. Look at the picture and answer the following questions.



(A) How many boys are there? _____.

(B) How many classrooms are there? _____.

(C) How many trees are there in all? _____.

(D) How many coconut trees are there? _____.

(E) How many balloons are there? _____.

(F) How many children are playing with balloons? _____.

2. Maneesh has put pictures of many animals in his room.

The table given below tell you the number of pictures of each animal.

Animal	Pictures of animals
Lion	
Monkey	
Deer	
Tiger	
Dog	

(A) Pictures of which animals are more in the table? _____.

(B) How many pictures are there in the table? _____.

(C) The pictures of which animal is more in number- lion or deer? _____.

(D) The pictures of which animals are equal in number? _____.

(E) The pictures of which animal is the least in number? _____.

3. Write the names of you and your friends in the table given below. Each alphabet of the name should go in a separate box. Count the number of alphabet in each name and complete the table.

S.No.	Name	Number of alphabet
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

(A) How many alphabet are there in your name? _____.

(B) Whose name contains the most number of alphabet? _____.

(C) Whose name has the least number of alphabet? _____.

(D) How many names have five or less than five alphabet? _____.

(E) How many names have more than five alphabet? _____.

(F) How many 'K's are there in the table? _____.

(G) Which alphabet occurs the most in the table? _____.

(H) Which alphabet occurs the least? _____.

4. Go to a vegetable shop. Note the prices of vegetables. Fill in the table given below.

Name of the vegetable	Price per Kg.
(A)	
(B)	
(C)	
(D)	
(E)	

Using Tally Marks.

Scores in kabaddi can be recorded by using tally marks (| | | | | | |). The table below gives the score between two teams. Read this table and answer the questions.

Name of the team	**Tally marks**	**Total points**
Chandu	||||||||	9
Raj	||||||||||||||||	16

(A) Which team got more points? _____.

(B) Which team got less points? _____.

(C) What is the difference between the scores of the two teams? _____.

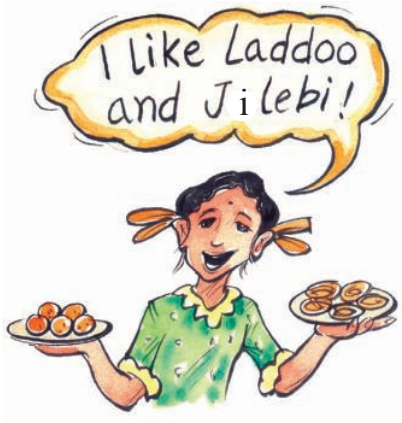
5. Design a table to record scores of a game you play using tally marks.

Name of the game _____ Number of players in each team_____

Name of the team	Score in tally marks	Total score/points/goals

I like...

You can find out what your class-mates like more. Do they like red colour, yellow colour or some other colour the best? Which game do they like to play? You can also find out what do they like to eat the most. So ask them and record what they say using tally marks.



Items	**Number of children (tally marks)**
Laddoo	
Rasgulla	
Jalebi	
Biscuit	
Curd	
Ice-cream	

(A) How many children like laddoos the most? _____.

(B) How many children like jilebi the most? _____.

(C) Which item is preferred by most children? _____.

(D) Name 3 food items that are liked usually but did not figure in the list at all. _____.

6. Make a similar table for the choice of colours and games in your classroom.

7. How many are absent?

Ask your teacher/headmaster about the total strength of your school. Also ask about the number of children who are present and absent on the day. Record the data in this table.

Date: Day _____ Month _____ Year _____

Class	Total Number of Students	Number of Students Present	Number of Students Absent
Class-1			
Class-2			
Class-3			
Class-4			
Class-5			
Total			

(A) How many students were absent in class 1? _____.

(B) Which class has the highest number of absent students? _____.

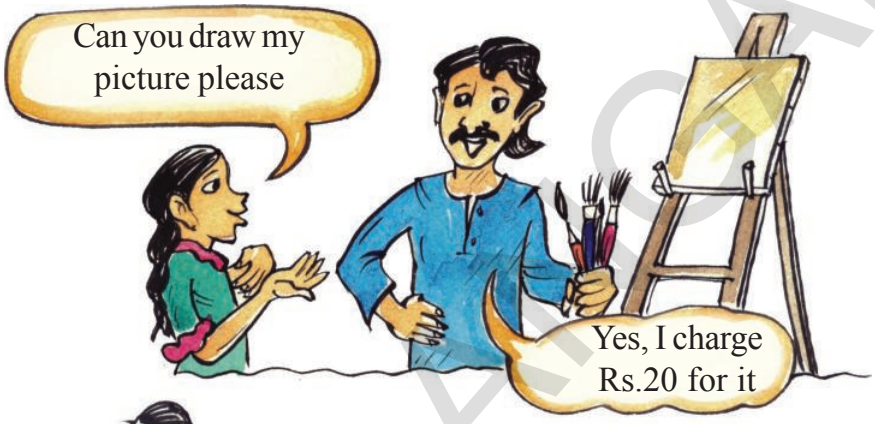
(C) Which class has the least number of absent students? _____.

(D) How many students are present in your class? _____.

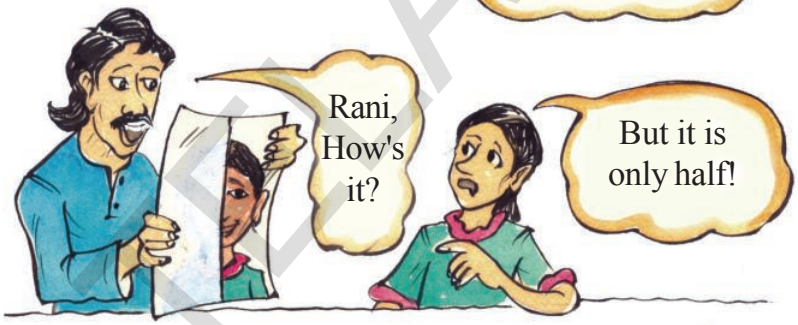
(E) How many students are absent in all classes? _____.

12 PATTERNS

One day Rani went to a painter



After a while the painter showed her picture

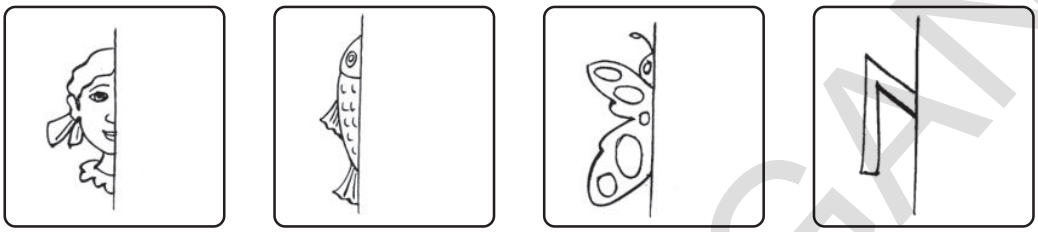


The painter tried to cheat Rani

Rani out smarted the painter

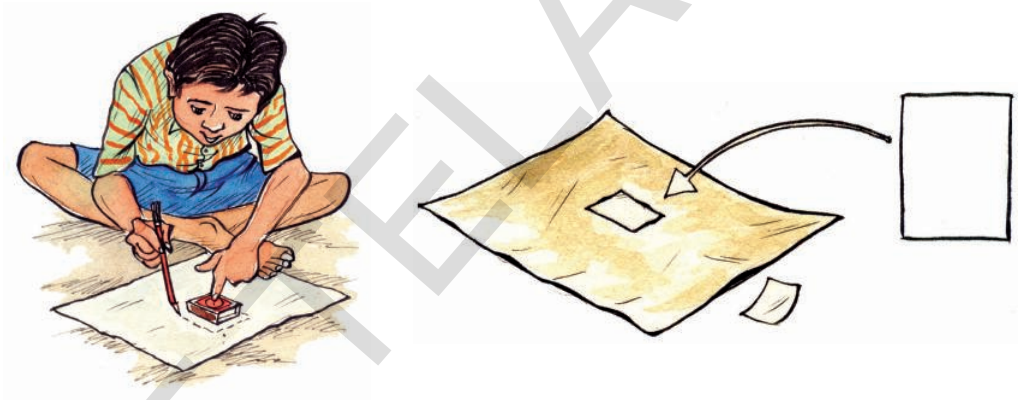
Activity-1

Take a mirror, put it on the line. Observe the full picture.



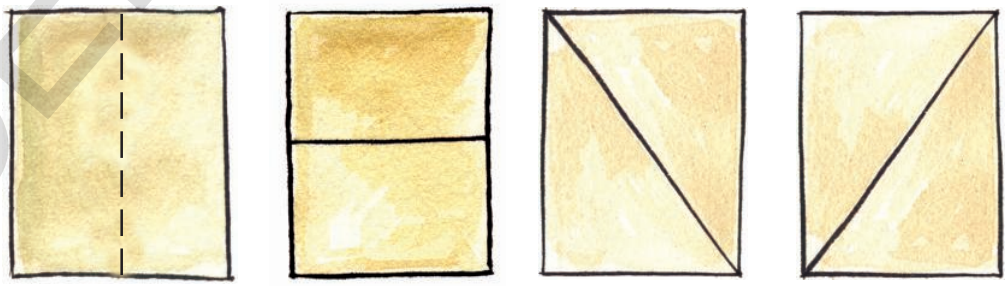
Activity-2

Take a match-box. Put it on a paper. Trace and cut it as shown in the picture.



Fold it such that one half covers the other half.

Did you and your classmates fold the paper in the same way? You will find that the paper can be folded in various ways.

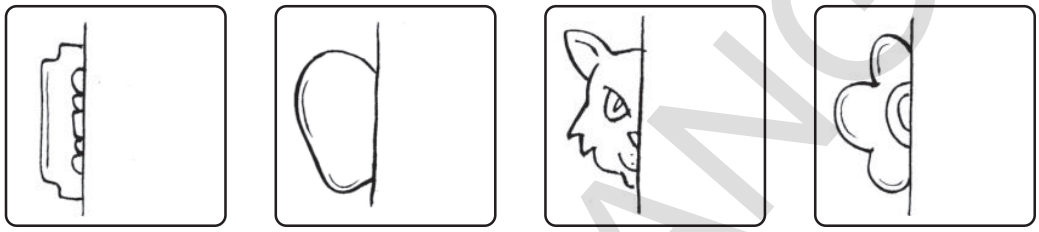


Put a mirror on the line in each picture. What do you see in the mirror?

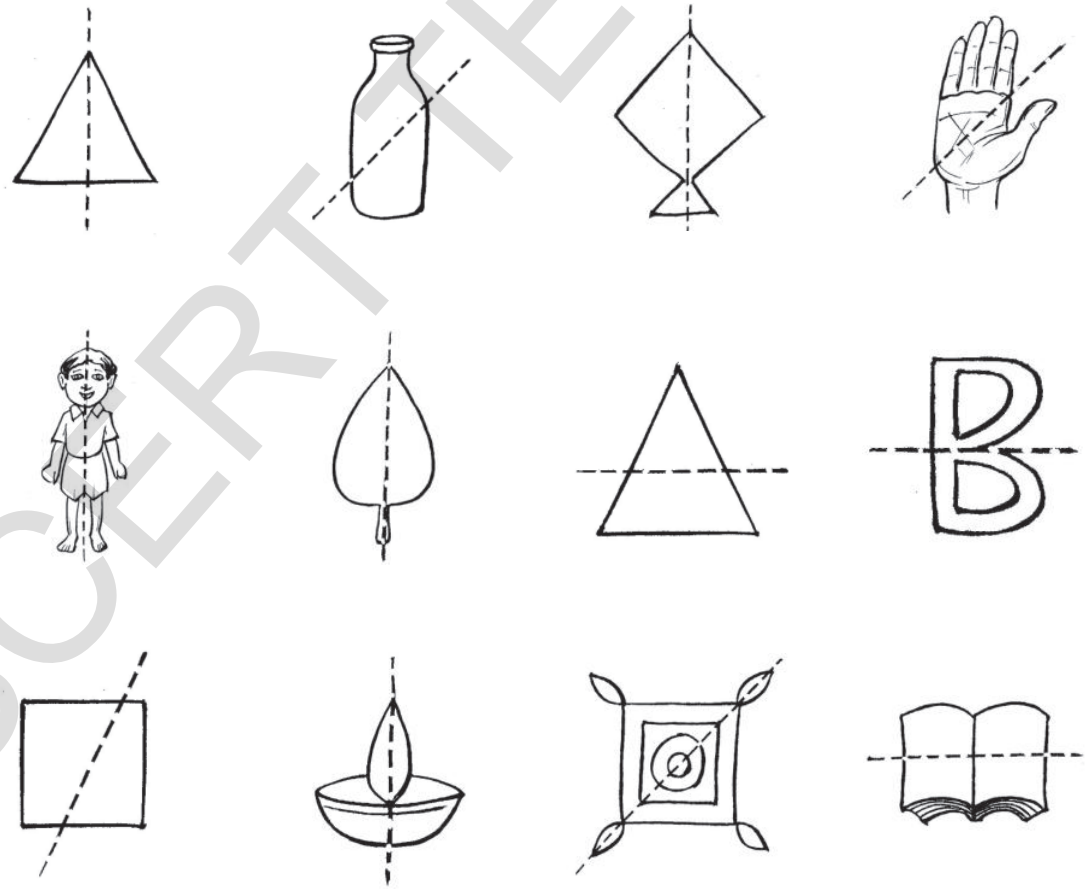
Do This

1. Take a match-box and chalk-box. Trace it in your notebook and cut the piece. Fold it to make it into exactly equal halves. Colour one half, put a mirror and observe the full coloured images.

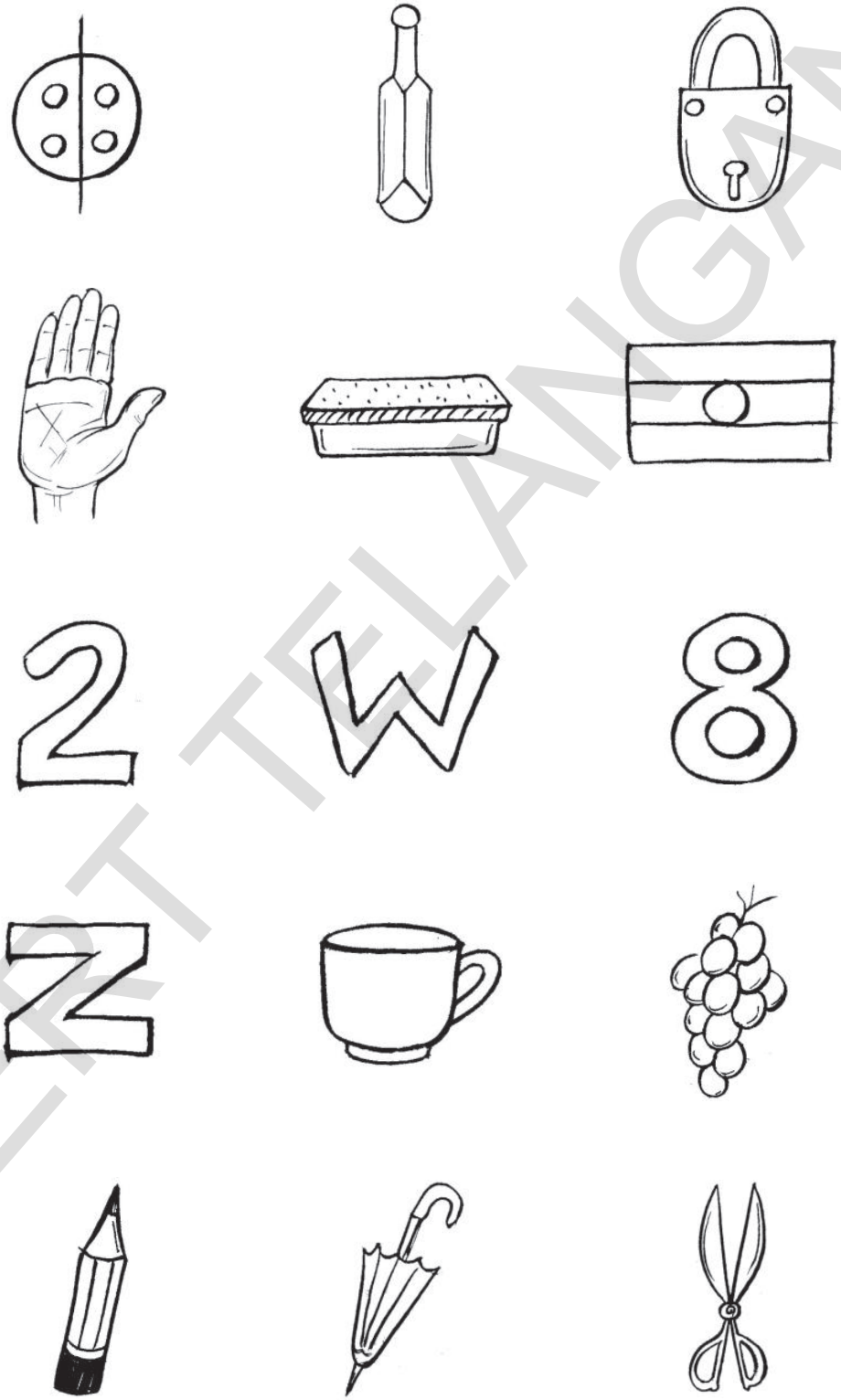
2. Use a mirror to see the full picture. Then complete the picture and colour it.



3. Look at the pictures given below. Does the line divide it the pictures into two equal halves? Tick (✓) the correct ones.



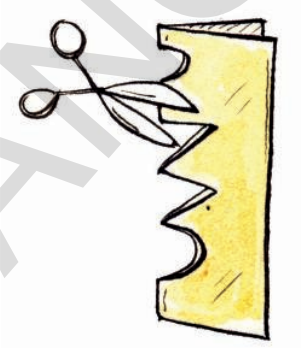
4. Look at the pictures given below. Can you divide them into two equal halves. Draw a line if they can be.



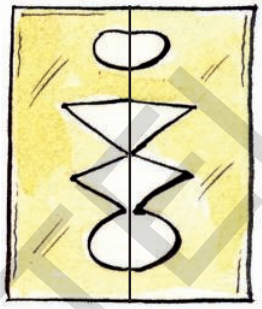
Activity-3

Take a sheet of paper. Fold it into half.

Cut it as you like, along the folded side.



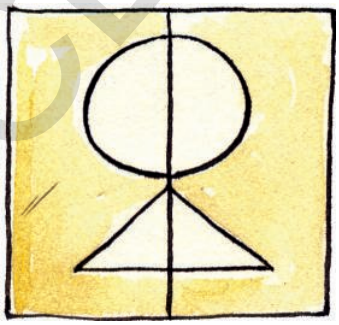
Unfold the paper.

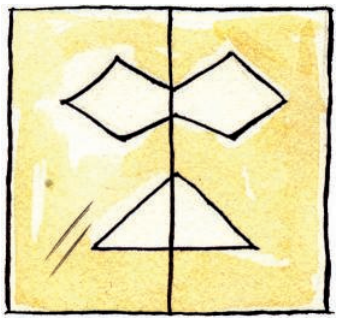


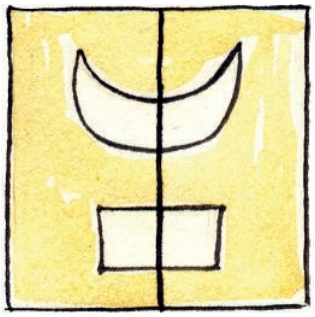
Do the two halves look similar?

Try These

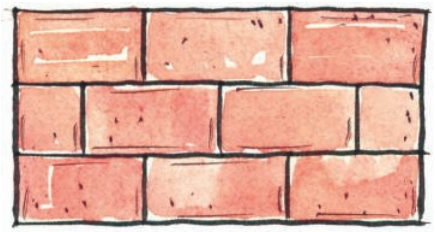
1. Try to make the following paper cuttings.

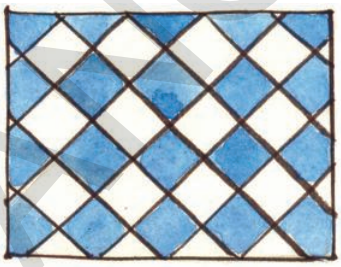


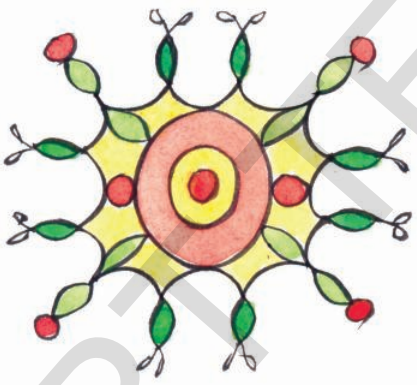


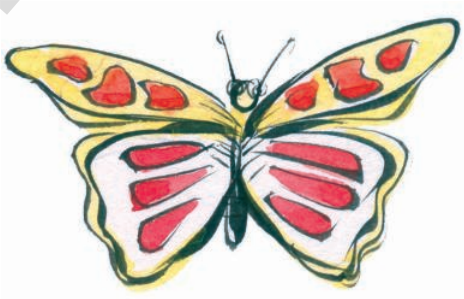


2. Look around you. Have you observed these patterns in your surroundings?



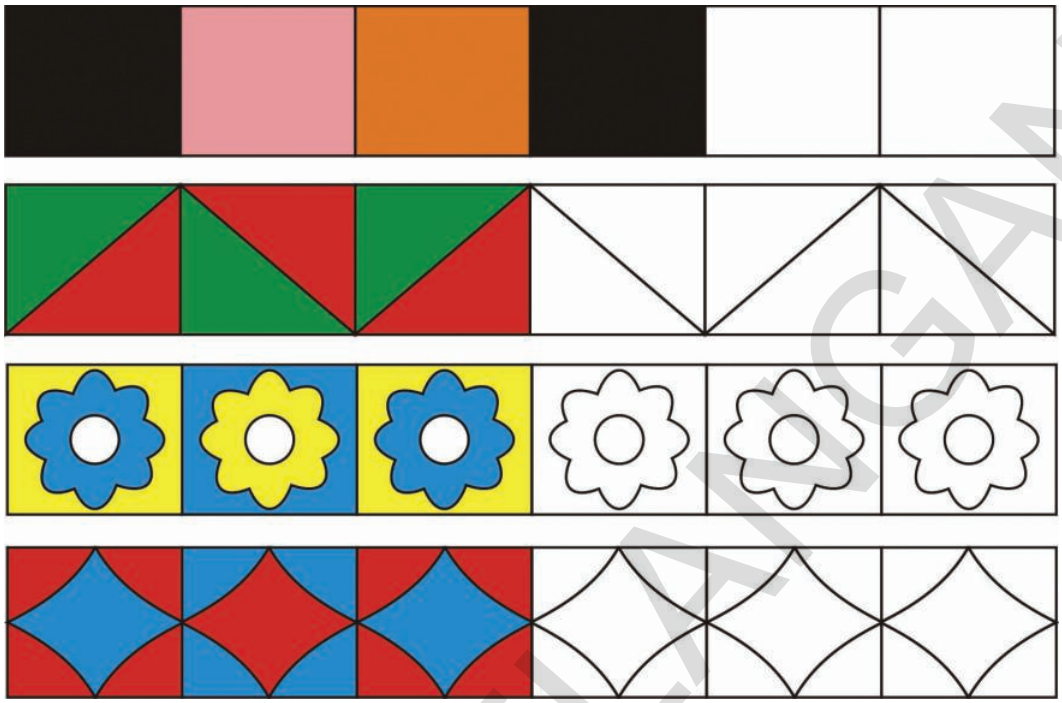




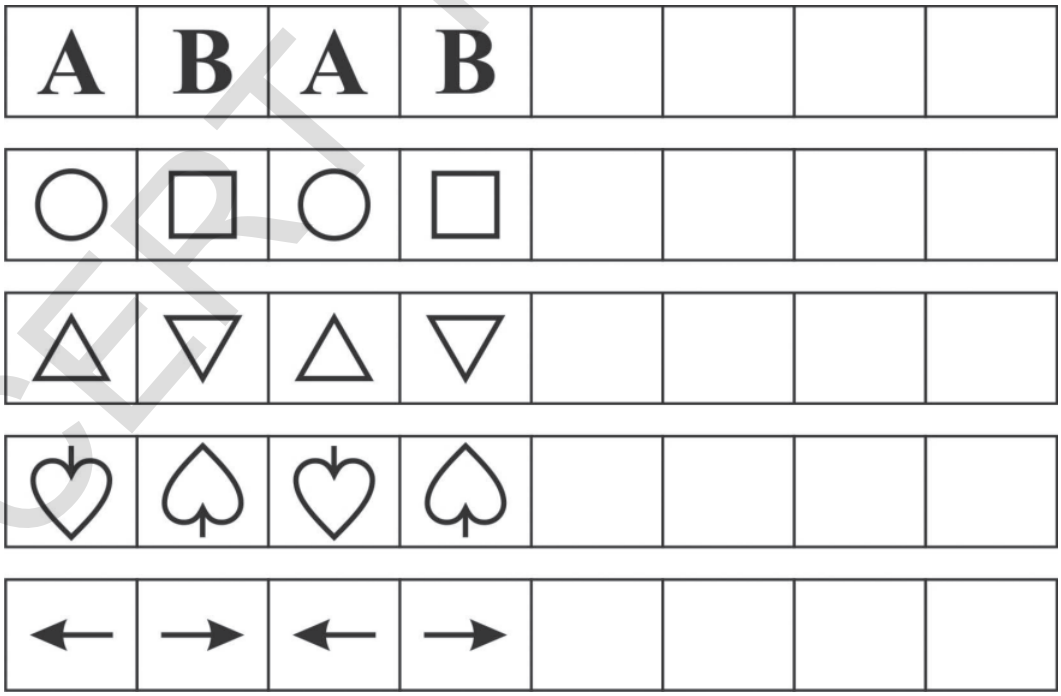


3. Draw any pattern which you have seen in your surroundings.

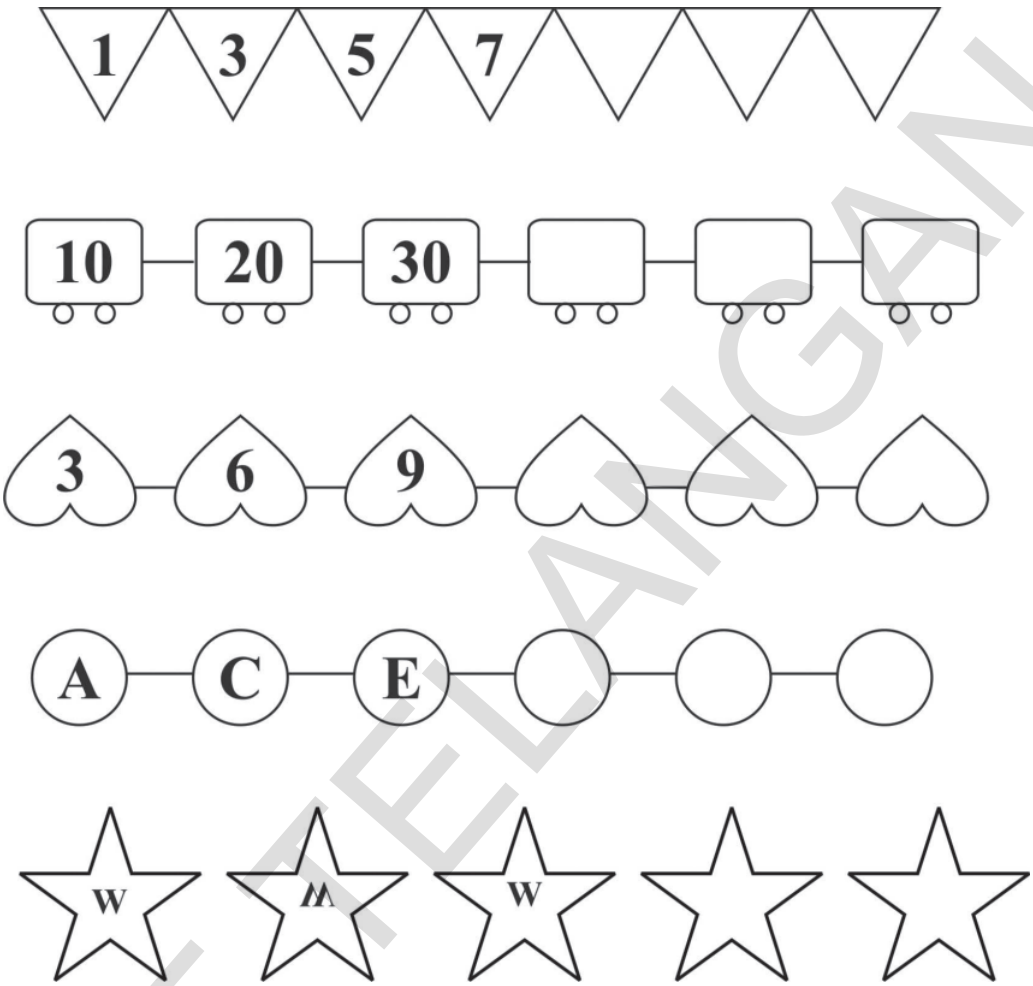
4. Look at the patterns given below and colour the next boxes.



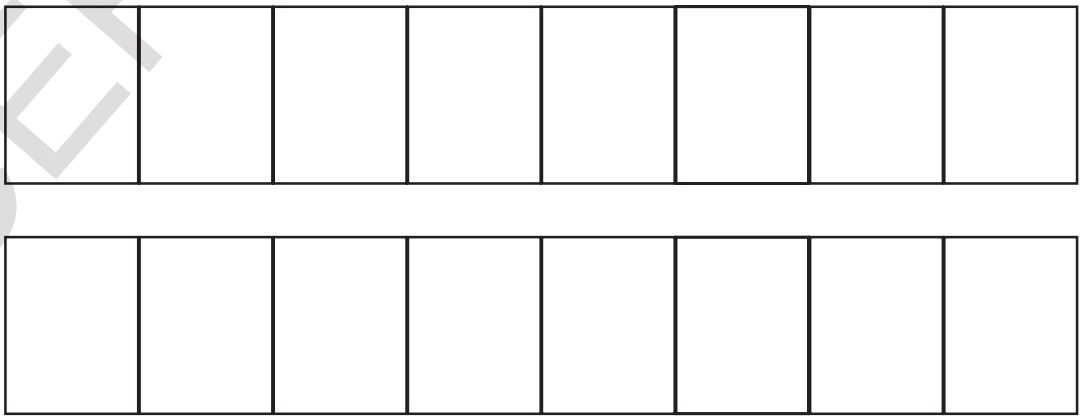
5. Look at the patterns given below and fill the next boxes.



6. Complete the given patterns.



7. Make your own pattern and colour it.



INSTRUCTIONS TO TEACHERS

(General and Pedagogic Instructions)

- ☞ This text book is prepared as per the syllabus and academic standards conceived by Mathematics position paper of State Curriculum Framework - 2011 (SCF-2011). and instructions of Right to Education Act - 2009 (RTE - 2009).
- ☞ This text book is formed by chapters with concepts like Numbers, four operations on numbers (Addition, Subtraction, Multiplication and Division), Geometrical concepts, Measurements, Datahandling etc.
- ☞ Situations, examples, games, activities etc in daily life are taken into consideration in the formation of these 12 chapters.
- ☞ We should strive to achieve "Academic Standards", by making every child to participate in the activities in the textbook by understanding the concepts.
- ☞ This textbook is prepared to achieve skills like conceptual understanding, problem solving, reasoning proof, correcting errors, forming new problems, solving problems in different ways and the concepts are reinforced by the respective concepts in the previous class.
- ☞ The pictures, examples and daily life situations are given in the textbook to understand clearly the concepts to solve problems systematically and to think logically to give reasons.
- ☞ The pictures in exercises are given in the textbooks sothat the child can understand them easily by observing them and respond to the questions.
- ☞ Exercises of "Do this" are given to know how far the child has understood concepts, problem solving and how he is responding. Similarly "Try these" or "Try this" exercises are given extensively after completion of two or three concepts in a chapter.
- ☞ The exercises given in this text book enable the students not only to understand the conscepts but also practice them with ease. As such, the children should be made to solve them in the text book only to the maximum extent. Whenever, they are not possible children should be made to work in the note book.
- ☞ The Teacher should prepare his own problems related to the concept besides solving the problems in the textbook. More over the teacher should encourage the student to prepare problems on his own.
- ☞ The teacher should collect TLM related to the concepts and activities given in the textbook and make the students to use them and participate in every activity effectively.
- ☞ The teacher should read and understand the concepts and problems those are given in the textbook thoroughly in the begining. Try to solve all the problems which are given in the textbook.
- ☞ At the end of this textbook, Syllabus and Academic standards of 3rd class mathematics are given. The teacher should read and understand them and should strive to achieve them through effective teaching learning processes.
- ☞ The teacher should keep in mind that whenever the academic standards prescribed for

each chapter are achieved by children, then only he/she has to feel that the syllabus is completed. Mere completion of the syllabus will not serve any purpose.

☞ Instructions are given for each chapter separately, besides the above general instructions. Read them thoroughly and understand logical sequence of the chapters to convey better subject to the student.

☞ Teaching learning strategies and the expected learning outcomes, have been developed class wise and subject-wise based on the syllabus and compiled in the form of a Hand book to guide the teachers and were supplied to all the schools. With the help of this Hand book the teachers are expected to conduct effective teaching learning processes and ensure that all the students attain the expected learning outcomes.

1. *SHAPES AND SPATIAL UNDERSTANDING*

- ♣ Introducing different perspectives of objects from different sides.
- ♣ Identifying the picutres of objects in different perspectives and drawing them.
- ♣ Drawing different shapes by tracing the objects which are used in daily life.
- ♣ Identifying shapes in a net of a cuboid by opening objects like match box, book etc in cuboid shapes.
- ♣ Forming different shapes like square, rectangle, triangle by playing with match sitcks. Identefying shapes in Rangoli.
- ♣ Tiling with squares, rectangles and triangles. forming different types of tiling. Tiling with circles which forms with gaps.
- ♣ Making paper boats, rockets, etc. by folding of papers. In this chapter, students understand the shapes of square, rectangle, triangle and circle by different activities in daily life used objects. They identify these shapes by enjoying while playing.

2. *NUMBERS*

- ♣ Reading and writing the 3-digit numbers by counting objects in Hundreds, Tens and Ones.
- ♣ Understanding the sequence of numbers upto 999.
- ♣ Estimating the objects in groups upto 50.
- ♣ Identifying the digits in a given number and explaining it in terms of value of digits.
- ♣ Identifying the before number and the after number of a given number and the middle number between two given numbers upto 999.
- ♣ Understanding expanded form of a number and short form of an expanded form of numbers upto 999.
- ♣ Comparing the numbers upto 999. Writing ascending and descending orders of given numbers. using <, > and = symbols to compare numbers.
- ♣ Rounding the given number in 10's and 100's.
- ♣ Writing 2-digit or 3digit numbers by given digits and compare them without repetition of digits.

3. *ADDITION*

- ♣ Understanding the concept of addition by 'joining' and by 'combining' activities.
- ♣ Able to solve addition problems by 'joining' and by 'combining'objects.

- ♣ Adding the 3 digit numbers horizantally and vertically with carry forward and without carry forward with result not more than 999.
- ♣ Giving reasoning proofs to the answers in addition and explaining it.
- ♣ Estimating the sum of two numbers.
- ♣ Identifying errors and correcting mistakes in addition problems
- ♣ Applying the cocept of addition in situations arising in daily life situations
- ♣ Solving the problems with addition in different ways.
- ♣ Solving the problems by reading stories and pictures on his own

4. SUBTRACTION

- ♣ Understanding the concept of subtraction by activities of "eliminating", by "remaining" and by "summation".
- ♣ Solving the problems by understanding the concept by "separating objects from given total and remaining objects", by "Decreasing from given total" and by " Comparing two quantities and difference of them".
- ♣ Solving the subtraction problems arising in above three solutions by horizantal and vertical methods with carry forward and without carry forward.
- ♣ Giving reasoning proof to the answers in subtraction problems
- ♣ Estimating "difference" in between two given numbers.
- ♣ Identifying errors and correcting mistakes in subtraction problems.
- ♣ Applying the concepts in "subtraction" in daily life situations
- ♣ Solving the subtraction problems in stories and pictures by reading them on his own.

5. USING ADDITION AND SUBTRACTION

- ♣ Understanding the relation between processes of addition and subtraction.
- ♣ Verifying the subtraction problems with addition.
- ♣ Solving the addition and subtraction problems by reading the information given in the tables.
- ♣ Identifying the paterns of numbers with addition and subtraction completing the patterns and forming new patterns.
- ♣ Forming new problems with the concepts of addition and subtraction.
- ♣ Solving addition and subtraction problems in stories and pictures by reading them on his own.

6. MULTIPLICATION

- ♣ Identifying similar groups with same number of objects.
- ♣ Forming the groups with same number of objects.
- ♣ Adding the number of objects in groups with same number of objects.
- ♣ Introducing multiplication by above three concepts.

- ♣ Understanding multiplication in situations 1) grouping increasing at the rate of 2) Array of objects in rows and columns.
- ♣ Communicating the above three concepts of multiplication in mathematical language.
- ♣ Writing tables from 2 to 10 by repeated addition.
- ♣ Identifying errors in solutions of multiplication problems and correcting the mistakes.
- ♣ Giving reasoning proof to the answers of problems of multiplication.
- ♣ Understanding the multiplication properties of '0' and '1'.
- ♣ Multiplying 2-digit number by single digit number and verifying the answer.
- ♣ Solving the problems arising concept of multiplication in daily life situations.

7. *DIVISION*

- ♣ Understanding the concept of division in situations "Dividing into groups with same number of objects" and "sharing equally".
- ♣ Understanding the terms involved in "Division" ("Divisor", "Dividend", "Quotient" and "Remainder").
- ♣ Expressing situations of division in mathematical language.
- ♣ Children will understand the division is repeated subtraction.
- ♣ Identify errors in the process of division and correcting the mistakes in it.
- ♣ Giving reasoning proof for the answers in division problems.
- ♣ Solving the division problems by division algorithom.
- ♣ Understanding the relation between multiplication and division.
- ♣ Solving and verifying the division problems which occur in daily life situations.

8. *MEASUREMENT*

- ♣ Measuring the objects by non-standard units and estimating measurements.
- ♣ Appreciating the need for standard units.
- ♣ Knowing that the scale is used to measure the length in centimeters.
- ♣ Measuring the lengths of objects and comparing them.
- ♣ Understanding the concept of "Capacity" of containers and identifying the vessels which hold more liquid.
- ♣ Measuring capacity of a container by another container and expressing capacity of a container in terms of capacity of another container.
- ♣ Solving problems related to capacity of containers in non-standard units.
- ♣ Appreciating need for standard unit of capacity and Understanding concept of "Litre".
- ♣ Understanding conservation of capcity and appreciating the property.
- ♣ Measuring the weights of objects in terms of "kg".
- ♣ Comparing the objects according to their weights.
- ♣ Estimating the weight of an object in terms of "kg".

- ♣ Solving problems related to weight in terms of "kg".

9. TIME

- ♣ Identifying chronological order of a daily life activities in a day.
- ♣ Comparing the events with time intervals.
- ♣ Reading clock and expressing time in "Hours".
- ♣ Solving the problems related to time in "Hours".
- ♣ Solving the problems, when any two of "Starting time", "Duration" and "Ending time" are given, then finding the third one.
- ♣ Identifying the chronological order of days in a week.
- ♣ Identifying the names of months in a year and understanding chronological order of them.
- ♣ Reading the calendar. Identifying months and dates with days.
- ♣ Comparing months with their number of days in them.
- ♣ Identifying the magical relations in numbers of a month in a calendar.

10. DAY TO DAY MATHEMATICS

- ♣ Identifying the situations in daily life in which mathematical operations are needed.
- ♣ Applying the concepts in four fundamental operations in the situations arise in daily life.
- ♣ Relating the concept of money with other concepts of length, weight, capacity and solving problems.
- ♣ Solving problems related to money and preparing rate charts.

11. DATA HANDLING

- ♣ Collecting data from various resources in daily life.
- ♣ Arranging the collected data in a particular order.
- ♣ Analyse the arranged data and come to a conclusion.
- ♣ Makes grouped data by using tally marks and classify it.
- ♣ Representing the data by pictogram.

12. PATTERNS

- ♣ Identifies the similar objects and patterns in them in daily life.
- ♣ Sorting the objects which are symmetrical and non-symmetrical.
- ♣ Identifying the axis of symmetry to divide them into two halves. Drawing axis of symmetry.
- ♣ Making, symmetrical shapes by folding papers and by cutting papers.
- ♣ Identifying patterns in lines and geometrical shapes. Understanding and completing the pattern.
- ♣ Understanding the patterns with numbers and letters. Completing the pattern.

SYLLABUS

1. SHAPES AND SPATIAL UNDERSTANDING

- Draws intuitively the plane, elevation and side view, top view, front view of simple (knowing) objects.
- Study of the net of a cuboid and its shape.
- Creates shapes using other shapes.
- Creates shapes through paper folding, paper cutting and understood intutively.
- Identifies 2-D shapes (square, rectangle, triangle, circle).
- Makes shapes using straight lines and curves.
- Tiles, a given region using a tile of a given shape.
- Distinguishes between shapes that tile and that do not tile.
- Traces circle, rectangle, square using with different objects.

2. NUMBERS

- Reads and writes 3-digit numbers.
- Understands place value in 3-digit numbers.
- Expands a number using place values.
- Counts in different ways (starting from any number).
- Compares numbers.
- Forms greatest and smallest numbers using given digits.

3 to 5. ADDITION, SUBTRACTION & USING ADDITION AND SUBTRACTION

- Adds and subtracts numbers by writing them vertically in the following two cases: without regrouping, with regrouping.
- Uses the place value in standard algorithm of addition and subtraction.
- Horizontal Addition and subtraction.
- Solves addition and subtraction problems in different situations presented through pictures and stories.
- Frame problems for addition and subtraction facts.

- Estimates the sum and difference of two given numbers.
- Adds and subtracts single digit numbers and two digit numbers mentally.
- Doubles two digit numbers mentally (result not exceeding two digits).

6. MULTIPLICATION

- Explains the meaning of multiplication (as repeated addition).
- Identifies and uses the sign of multiplication.
- Constructs the multiplication tables of 2, 3, 4, 5 and 10.
- Uses multiplication facts in situations.
- Construct tables for 6, 7, 8, 9.
- Multiplies two digit numbers by single digit number using standard algorithm and Lattice multiplication algorithm.

7. DIVISION

- Explains the meaning of division from context of equal grouping and sharing.
- Relates division with multiplication.
- Completes division facts (Double digit by single digit) : by repeated subtraction, by grouping, by using multiplication tables.

8. MEASUREMENT (Length, Weight, Capacity)

Length

- Appreciates the need for a standard unit.
- Measures length using appropriate standard units of length by choosing centimeters.
- Estimates the length of given object in standard units and verifies by measuring.
- Uses a scale.

Weight

- Weighs objects using 1kg.
- Appreciates the conservation of weight.

Capacity

- Measures and compares the capacity of different containers in terms of a litre.
- Appreciates the conservation of capacity.

9. TIME

- Reads a calendar to find a particular day and date.
- Reads the time correct to the hour.
- Sequences the events chronologically.

10. DAY TO DAY MATHS

(Money, length, weight, capacity and time)

- Adds and subtracts amounts using column addition, and subtraction with and without regrouping.
- Makes rate charts (upto ₹ 999) bills.
- Solving real life problems involving money, length, weight, time and capacity.

11. DATA HANDLING

- Records data using tally marks.
- Collects the data and represents in terms of pictograph choosing appropriate scale and unit for display through pictographs.
- Draw conclusions from the data by discussing with the teacher.

12. PATTERNS

- Identifies simple symmetrical shapes and patterns.
- Make patterns and designs from straight lines and other geometrical shapes.
- Partitions a number in different ways (only 2 partitions).
- Identifies patterns in his surroundings.
- Identifies patterns in multiplication tables of 2, 5, and 10.

ACADEMIC STANDARDS

Content	Problem Solving	Reasoning Proof	Communication	Connections	Representation
Numbers operations (addition, subtraction, multiplication and division)	• Counts from any number by using groups as 100s. 10s, ones. • Can complete given sequence of numbers up to 999. • Able to find the sum of two numbers by joining, combining by grouping, regrouping up to 999. • Demonstrates the understanding of the addition, subtraction of the numbers horizontally, vertically up to 3 digit numbers. • Can multiply two digit numbers with one digit number. • Solves the problems on division (divisor is single digit, without remainder).	• Estimates the number of objects in a group upto 50. • Compares the numbers upto 999 based on place value. • Can write the given numbers in ascending, desinding orders. • Can form the greatest and smallest two digit and three digit numbers with, and without; repetition of given digits. • Determines the reasonableness of calculated answers in addition, subtraction. • Creates patterns using numbers involving addition and subtraction upto 50. • Identifies errors in solving addition, subtraction and multiplication.	• Able to read and write 3 digit numbers. • Comparing any 3 digit numbers using symbols <, >, =. • Round the numbers upto the nearest 10s and 100s.	• Applies addition, subtraction, simple multiplication in dialy life situation. • Uses three digit numbers (school strength, purchasing articles, pay of workers, etc)	• Represents the numbers up to 999 as numbers using cubical blocks

Content	Problem Solving	Reasoning Proof	Communication	Connections	Representation
Shapes and Spatial under-standing	• Sorts objects using character-istics of shapes. • Identify the object by observing different view. • Identify basic 2-D shapes like square, rect-angle, triangle and circle. • Distinguishes between the shapes that tile and do not tile. • Identifies objects for tracing circles, rectangle, squares.	• Can read simple diagrams and maps. • Describes rela-tionship between shapes of cuboids and the net of cuboids. • Able to read halves in a whole. • Gives reasons for tiles of a given region using a given tile shape.			• Can draw 2-D shapes on grid paper. • Can divide in to two halves and represents halves in a whole. • Identify different shapes using different colours in to different shapes.
Day to day maths (Money, length, weight, capatity, time)	• Adds and subtracts amounts without regrouping in written and also mentally. • Prepares rate charts and bills.			• able to do simple problems connecting money with length, weight and daily life situations.	
Mea-sure-ment (length, weight and capac-ity)	• Measures the length, weight and capacity using suitable apparatus	• Estimates the length of given objects like table, blackboard etc. in standard units(cm) • Estimates weight, and capacity in standard units	• Identifies need for a standard unit for measuring lengths, capacity, weight		
Data handling	• Collects the suitable data for the tabulating		• Comments on the data		• Represent the data in tabular form