# **MATHEMATICS**

# Standard III

# Part - I



DEPARTMENT OF EDUCATION

State Council of Educational Research and Training (SCERT); Kerala

**2016** 

#### THE NATIONAL ANTHEM

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

#### PLEDGE

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 respect to my parents, teachers and all elders and treat everyone with courtesy.

I pledge my devotion to my country and my people. In their well-being and prosperity alone lies my happiness.

**Prepared** by :

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My dear students,

Numbers, figures, patterns!

We have entered into a new world of mathematics.

Let us learn mathematics to add, to subtract, to multiply.

Let us go forward, playing and enjoying with our friends discovering new things and correcting our past mistakes.

Let us move ahead with confidence and get ready for more exciting mathematical experiences!

With best wishes,

# Dr. P. A. Fathima

Director SCERT Kerala

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- 5. If Alike Joins ......63
- 6. Time.....75

# Certain icons are used in this textbook for convenience



Additional activity/ Extended activity



How I found out



How my friends found out



Assessment



# **Hundred and above**

# Hundredth Anniversary

Athira's school was set up 99 years ago.

The school is going to celebrate its hundredth anniversary next year.

Boxes to collect donations for the school were given to every student.

After a few days Athira opened her box.

All the coins in the box were 1 rupee coins.

Athira arranged the coins in the box in groups of ten.

How many groups of ten could she make?

How many coins were there altogether?

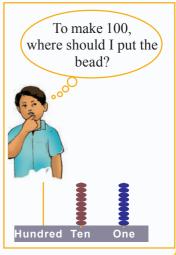
Athira's mother gave her one more 1 rupee coin.

Now, what is the total number of 1 rupee coins?

Athira gave the coins to a shop and exchanged it for notes.

All the notes that the shopkeeper gave Athira were 10 rupee notes.

How many 10 rupee notes did she get?



ooth Anniversa

# Types of notes

In how many ways can hundred one rupee coins be changed to notes?

If all the notes are 50 rupee notes, then how many notes will be there ?



# Can you complete it?

Athira's father gave her a hundred rupee note.

Athira had a 1 rupee coin with her.

When 1 was added to 100, it became 101.

That is **100 + 1 = 101** 

Can you complete the table?

		100 + 1 = 101
		100 + 2 = 102
Hanger and helds		100 + 3 = 103
	000000	
		100 + 10 = 110

# **Ten Hundreds**

For the hundredth anniversary celebration, 10 students contributed rupees 100 each. The table below shows the money given by them. Fill it.

		·	
	100		10 Hundreds is equal to
	200		Thousand
	300	Three Hundred	6.0)
4 Hundred	400		
5 Hundred		Five Hundred	
6 Hundred			
	700		
	800	Eight Hundred	
9 Hundred		Nine Hundred	
	1000		



As part of the anniversary celebrations, 100 saplings are to be planted around the school. How many saplings each can be planted?

Sapling	What I have found out	What the group found out
Gooseberry		
Tamarind		
Mango tree		
Jack fruit tree		
Mahogany		
Neem		
Guava		
Drum stick tree		
Sapota tree		
Almond tree		

# Book number

Students collected books for the school library.

The books collected on the first day are shown below. Can you number the books in order?



On the second day, the students collected 34 books. Then what is the number of the last book?

The books collected on the fifth day were numbered from 253 to 256. How many books were collected on the 5<sup>th</sup> day?

# How many numbers?

How many numbers are there from 421 to 430?	
How many numbers are there from 567 to 573?	
How many numbers are there from 890 to 898?	

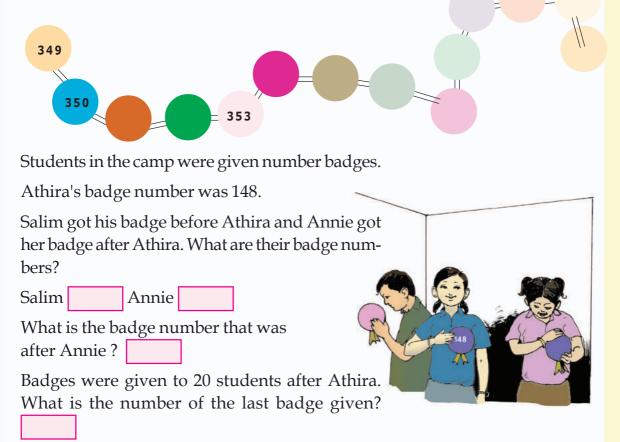
,	

.....

The method I used to find out the numbers between one number and another

# Maths Camp

A Maths Camp is to be organized in the school. The camp may be decorated with number chain. Complete the number chain given below.



# Fill the boxes with numbers

828	829	830
	268	
318	319	
189		191
758		
	673	
		410

How did you find out the numbers in the empty boxes?

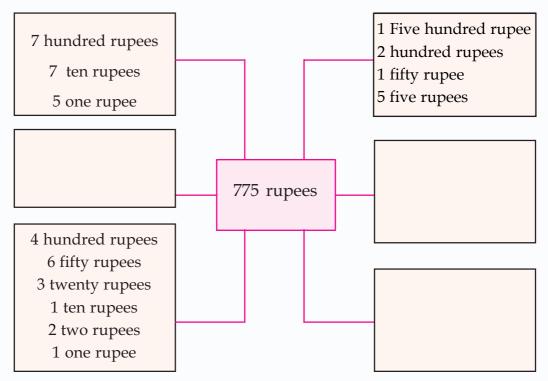
# Donation

The amount collected last week as donation is given in the table below. Fill the empty boxes.

Sl.	Dav	Total amount					
No.	Day	in figures	in words				
1	Sunday	775	Seven hundred and seventy five				
2	Monday	501		ſ			
3	Tuesday	450		a			
4	Wednesday		Eight hundred and ninety nine	B			
5	Thursday	900	Nine hundred				
6	Friday		Three hundred and seventeen	L			
7	Saturday	925		$\rightarrow$			

# **Notes and Coins**

What are the coins and notes in the amount collected on Sunday?



Now write the amount collected on Monday and Tuesday as coins and notes in different ways.

# Write in table

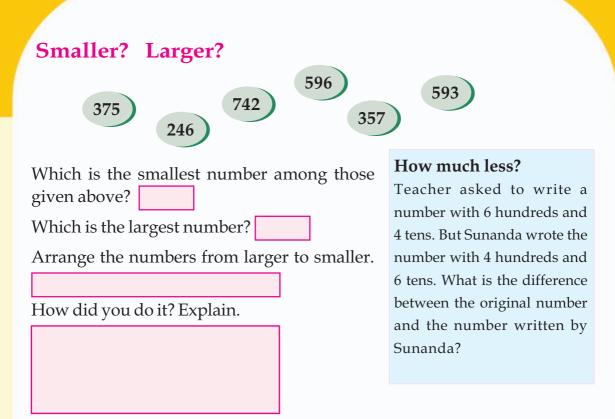
Amount	Number of notes/ coins								Total amount
	500	100	50	20	10	5	2	1	
899	1	3	1	1	1	2	4	1	500 + 300 + 50 + 20 + 10 + 10 + 8 + 1

Write the amounts collected on Thursday, Friday and Saturday in the table given above.

# Fill in the boxes

# Arrange in the Abacus

5 hundreds 2 tens 4 ones	524	214
	632	132
700 + 90 + 8		
9 hundreds 5 ones		520
	859	
	470	600



# Classify and arrange

Students classified the books collected in a day.

Look at the numbers given to the books in each section.

Can you arrange them?

**Travel books** 324, 432, 234, 329, 502, 243

Mathematics books

372, 405, 198, 350, 218, 281, 179

**Science books** 340, 202, 153, 418, 147, 390, 284, 189



# Small or Big?

123

Use the digits given above to form 3 digit numbers. You can use one digit only once in a 3 digit number.

Which is the smallest number?

Which is the largest one?

Can you write the 3 digit numbers in the ascending order?

Look at the digit in the 100<sup>th</sup> place of the smallest and largest numbers.

What is their speciality?

What about the digit in the one's place?

• Now use the digits 4, 5 and 0 to form as many 3 digit numbers as possible. Write them in the descending order.



#### Number of notes

Sunir has 754 rupees with him. The number of notes and the sum of the digits are equal. What are the notes with Sunir?

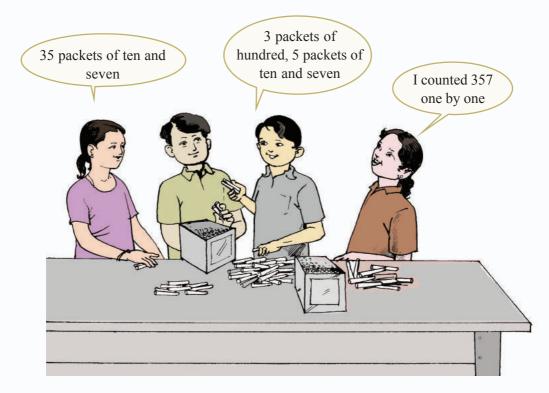
Without repeating

any of these numbers, how many 2 digit

numbers can be written?

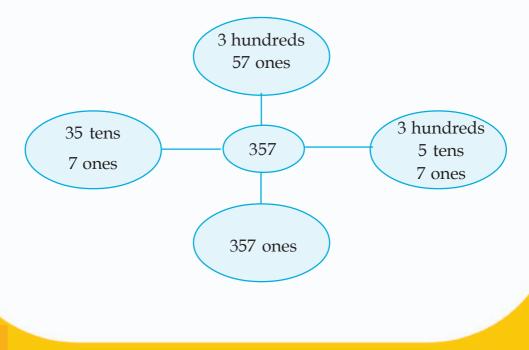
# **Count the chalks**

The children counted the chalks they made.

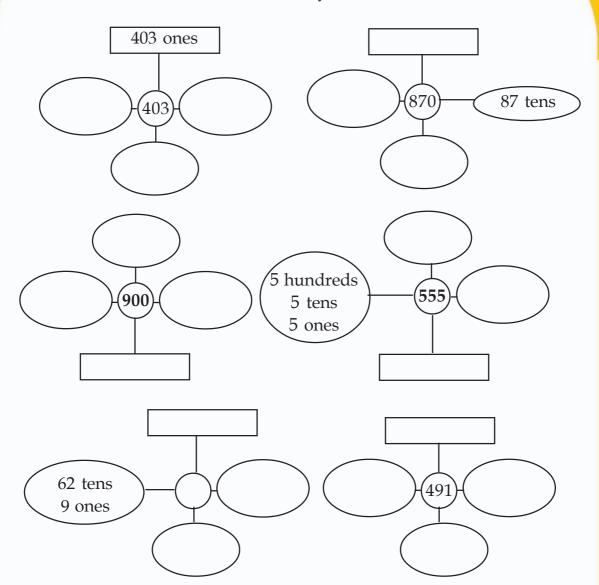


All got 357.

Look at the picture below.



Write these numbers also in the same way.



#### **Big Number**

Name of the player	Number				

5 children can play this. First player throws the dice. The number in the dice can be written in any box. Then the others throw the dice. When all the boxes are filled, the person who gets the biggest 3 digit number wins. Now, play this game with your friends.

# Complete the pattern

# Cost of the bag

Athira's father bought her a bag. He gave the shopkeeper 2 hundred rupee notes, 17 ten rupee notes and 13 one rupee coins. What is the cost of the bag?

# Which Note?

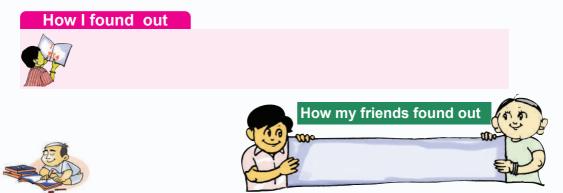
Athira and her friend Ramla went to the shop with a note each.

When Athira changed her note, she got 2 hundred rupee notes, 3 fifty rupee notes, 5 ten rupee notes and 20 five rupee notes.

Ramla bought things for 50 rupees. She got 2 hundred rupee notes, 4 fifty rupee notes and 5 ten rupee notes as balance.

What is the note they had in the beginning?

In which ways can you arrange notes and coins to get 500 rupees?



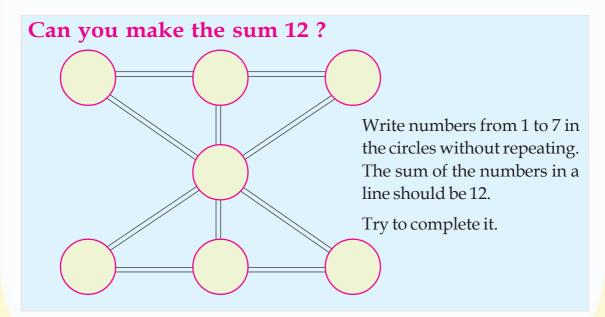
#### 50 Rupee note

Raju gave 8 hundred rupee notes and in return got 50 rupee notes. How many 50 rupee notes did he get? If he got it back in 20 rupee notes, how many 20 rupee notes would be there?

# **Giving numbers**



Numbers are given to students participating in sports events. Students of LP section were given numbers from 201 to 265. Students of the UP section were given numbers from 266 to 340. From which section did the maximum number of students participate?



# Fill the boxes

100	200	300					
300	100	200		400			
200	300	100					

- Look at the numbers in the first box. What are the numbers in each row?
- Now use the numbers 400, 500 and 600 to fill the second box. Use the numbers 700, 800 and 900 to fill the third box.
- When we keep the boxes together, what are the numbers in the first row?
- Are these numbers present in the second and third rows?

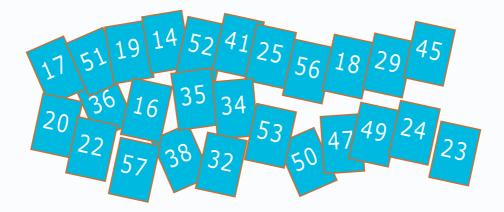
# Across and Down

90	140	190	 	•••••
100	150	200	 	
110	160	210	 	
300	450	600		

There is a pattern for the numbers in the box. Fill the box according to this pattern.

	000		100		000														
L	et	us	ad	d															
	1	2	3	4	5	6	7	8	9	+	1	2	3	4	5	6	7	8	9 <b>+</b>
	9	8	7	6	5	4	3	2	1		9	8	7	6	5	4	3	2	1
									1		1	2	3	4	5	6	7	8	9
	1 1	1	1	1	1	1	1	1	1	-	9	8	7	6	5	4	3	2	1
_										-									2
• What about the next pattern. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2								2											







# How many pairs?

- Unni and Tommy are playing number cards.
- The sum of the two cards should be 70.
- One who makes the most pairs will win.
- Now try to get 70 by adding the numbers in two cards.
- How many such pairs did you get?

# 

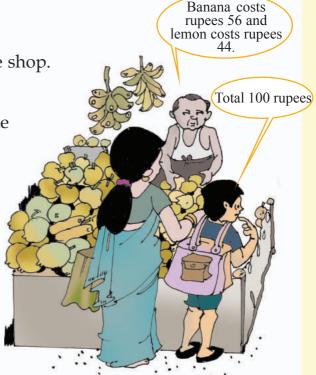
# My thought

Tommy and his mother went to the shop. They bought fruits for 100 rupees.

How did Tommy think of giving the money?

56 + 44	=	56 + 40 + 4	=	100
56 + 44	=	50 + 6 + 40 + 4	=	100
•••••	=		=	•••••





• Ammu bought 2 kilograms of sugar and 2 kilograms of dal from the shop. Cost of 1 kilogram of sugar is rupees 35 and dal is rupees 68. How much money did she pay?

#### **Rows and Columns**

Add together the numbers horizontally, vertically and diagonally. Do you see any peculiarity in the sum?

Try to make a similar one with 9 consecutive numbers.

128	121	126
123	125	127
124	129	122

Have you got a magic square?

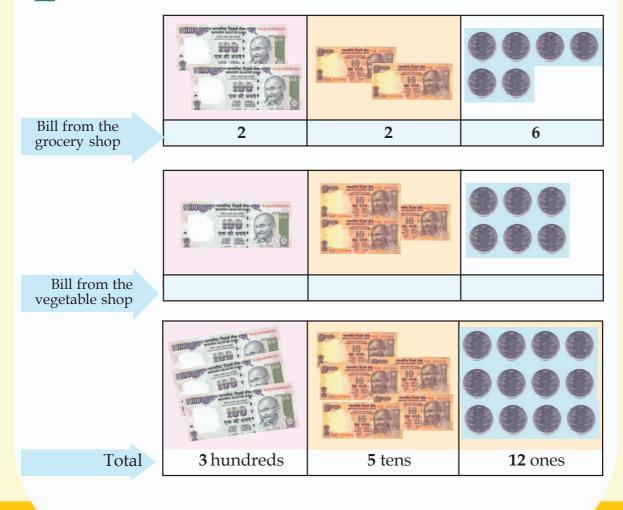
# Look at the Bill

Tommy and Mary went to the shop to buy some grocery and vegetables.



Number 228	Grocer's	s shop	Number 136 Veg	getable	shop
Item	Weight	Amount	Item	Weight	Amoun
Rice	5 kg	150	Onion	1 kg	25
Sugar	2 kg	56	Lady's finger	1 kg	25
Jugai	2 Kg		Carrot	1 kg	36
Soap	2 kg	20	Banana	1 kg	50
	Total			Total	•••••

What is the amount in each bill? What is the total amount?



Changed 12 one rupee into a ten rupee and 2 one rupees. We can add a ten rupee with 5 ten rupees.

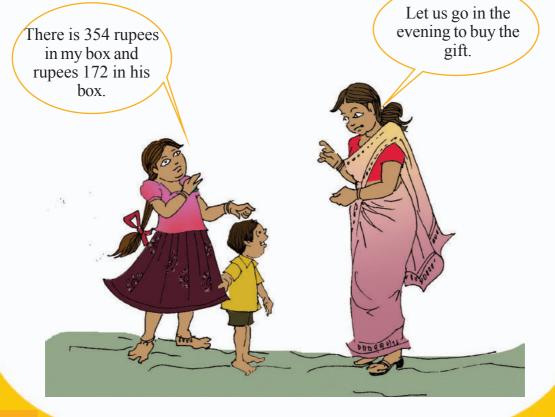
	1-		]
3 hundre	eds	5 tens	<b>1 2</b> ones
			<u> </u>
3 hundred	ls	6 tens	<b>2</b> ones
		i	1
hundreds	tens	ones	1
			1

We can write this as

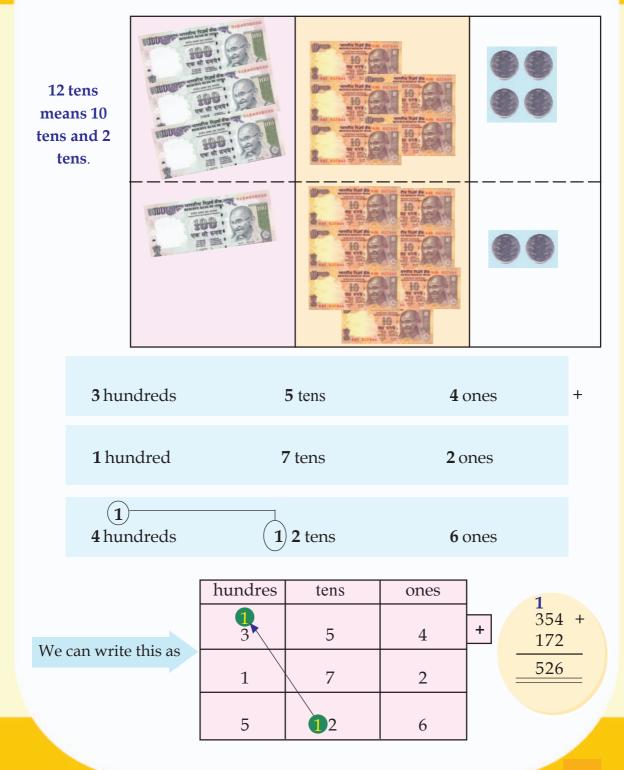
hundreds	tens	ones		1
2	2	6	+	226 + 136
1	3	6		362
3	6	1 2		

# **Birthday Gift**

Mary and Tommy opened their savings box to buy a birthday gift for their father.



What is the total amount of their savings?



# Library

Mary's school library has 524 Malayalam books and 75 English books.



What is the total number of books in the library including the new arrivals? What is the total number of English books?

What about Malayalam books?

# **Sports Meet**

In the sub-district sports meet conducted at Mary's school, 199 boys and 204 girls participated on the first day. On the second day, 31 other boys and 21 other girls also participated.

- How many students participated in the sports meet altogether?
- Who are more in number, girls or boys?
- Students who participated in the race, were given chest numbers from 951 to 989. If so, how many took part in the race?



#### How I found out





#### The Beauty of numbers

Using three consecutive digits from 1 to 5, write the largest and the smallest numbers. Find their sum. What is the peculiarity of the sum?

Find out.

### How many groups?

As part of the sports meet, 269 coconuts were received from the LP section to make *payasam*. However, 162 more coconuts were received from the UP section than from the LP.

- How many coconuts were there altogether?
- If all the coconuts are arranged in groups of 100, what will be the number of groups?





AHING		
Ιu	understood how to find the total	
	ithout knowing the number in the UP section, can find the total	
Ιa	m sure that the method I used is correct	
	an say the method and operation by which reached the answer	

# Victory celebration

Look at the points received by each group in the school sports meet.



Find the total number of people who bought the tickets.

# Colour it

Somebody is hiding in this picture. Find the sum of the numbers given below. Colour the parts having these numbers.

345 + 543	740 + <u>360</u>	580 + <u>406</u>	148 264 246 249 548 O 264 246 249 548 O 241
529 +	567 +	606 +	240 344 70 921 921 242
382	765	<u>205</u>	
340 +	457 +	409 +	210 1100 0 626
286	308	<u>235</u>	148 1332 532
	 393 + 139		948 218 238 228 218 258 248 268 208

# Win a prize

Look at the advertisement of a textile shop.

- Sini bought a saree and a shirt.
- Sanitha purchased a churidar, a saree and a bag.
- Rasiya bought a bag and an umbrella.
- Rasheed bought a baniyan, a shirt and an umbrella.
- Laila bought a skirt and a top.
- Ancy purchased a saree.

Who all will get the gift coupon?

Baniyan 76 rupees	
Shirt 325 rupees	
Churidar 350 rupees	
Skirt 265 rupees	
Гор 215 rupees	
Umbrella 175 rupees	
Bag 285 rupees	
Saree 375 rupees	
Note : Gift coupons for those	e
who buy things for over 50	0
rupees.	



- In a plantain grove, 874 saplings were planted on the first day and 569 on the second day. What is the total number of saplings planted?
- A wholesale dealer distributed 666 bags of rice on the first day, 555 bags on the second day and 777 bags on the third day. Find the total number of bags distributed on the three days.
- For a relief fund, 468 rupees was received on the first day and 357 rupees on the second day. What is the total amount collected in the first two days? To make it 1000, how much more is needed?
- To see the Maths fair, 228 people came on the first day and 272 on the second day. On the final day double the number of people of the two previous days came. Then what is the total number of visitors to the fair?
- For a study tour, 6 buses having 40 seats each were arranged. In the last bus, half the seats were empty. Find the total number of students who went for the tour?

#### **Odd or Even**

Sum of two consecutive numbers

1 + 2	=
2 + 3	=
+	=
9 + 10	=
22 + 23	=
131 + 132	=
+	=
+	=

What is the peculiarity of the sum of two consecutive numbers? Why?

The sum of two consecutive numbers is always an odd number.

Find the sum of two even numbers.

2 + 4	=
4 + 6	=
6 + 10	=
+	=
14 + 16	=
28 + 40	=
246 + 268	=
+	=
+	=

What is the peculiarity of the sum of two even numbers? Why?

- In the school PTA meeting, 107 men and 270 women participated. Find the total number of persons who attended the meeting.
- Village Club, under the project 'A hen to a student' distributed chicks to all the students in the school free of cost. On the first day 384 chicken were distributed and on the second day 448. Then what is the total number of students in that school?

Find the sum of the two odd numbers.

3+5 = ..... 5+7 = .... 13+17 = .... 127+139 = .... +.... = .... +... = ....

What is the peculiarity of the sum of two odd numbers?

What is the sum of an odd number and an even number ?

#### Can you find the way

Chakki cat is trying to catch Chindan mouse. The cat can catch the mouse only if he goes in the right path. Can you help the cat?

To find the way cat has to jump from the first box to the box having double the number of the first box. Again jump to the box with double the number.

	C.
	SA
(	355

1	2	4	8	16	18
5	4	6	42	14	36
10	8	16	32	64	72
20	88	32	126	456	48
40	36	64	128	256	512
80	100	128	500	1000	1024

Abu bought vegetables for rupees 445 and sold it for rupees 600. Fruits were purchased for rupees 415 and were sold for rupees 600.
 For purchasing these items how much did Abu pay?
 What is the total amount Abu got after the sale?

#### Write the next numbers

•	10,	30,	50,	70,	•••••		•••••
•	120,	140,	160,	180,			•••••
•	555,	565,	575,	585,			•••••
•	225,	250,	275,	300,			•••••
•	100,	110,	130,	160,		•••••	

# Add these

Arrange to get the sum 450 when it is added row wise and column wise.

10 + 20 + 30 +	40 + 50 +	- 60 +	70 + 80 +	90 =	450
20 + 40 + 70 +	90 + 10 +	- 50 +	80 + 30 +	60 =	450
30 + 90 +	••••••	•••••	••••••	=	
40 + 10 +	••••••		••••••	=	
50 + 60 +			••••••	=	
60 + 70 +			••••••	=	
70 + 80 +				=	
80 + 50 +			••••••	=	
90 + 30 +			••••••	=	
450 450					

#### Numbers and Numbers

5		3 3 3		1 1	+	1 1	2 2 2 2	3	4 4	5	+		4 4 4		8	+	8	4 4 4	2	+
5	8	9	8	5		1					-	9	3	2	8	_				



# To the store

This is the store run by the students of a Govt. UP School.

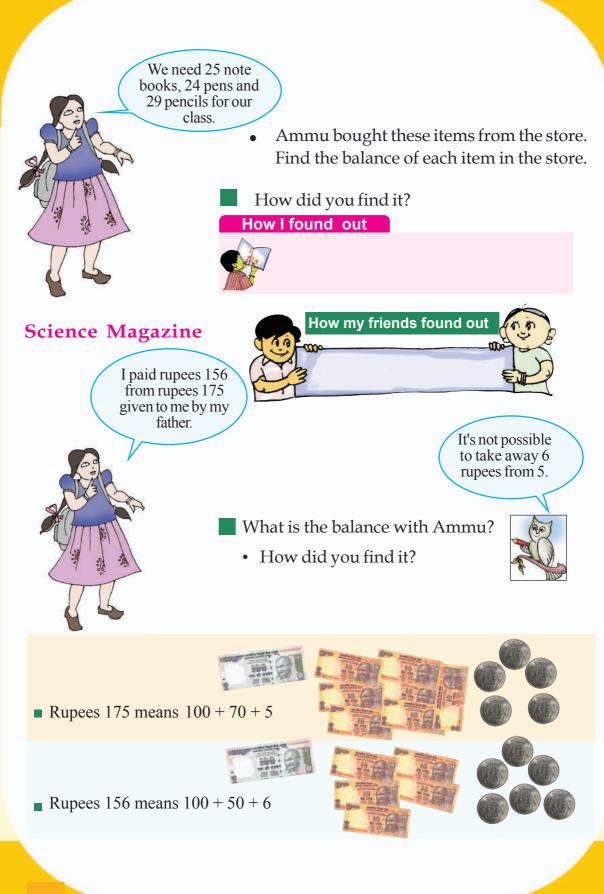
- Read the stock board of the store.
- Find the stock of each item.
- What about today's sale?





Note book	
Pen	
Pencil	

• Next day 72 note books, 100 pens and 125 pencils were added. Find the total stock of each item now.

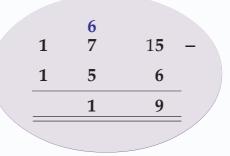


• If one ten rupee is taken from seven ten rupees and then added to rupees 5, what do we get?

We can write this as

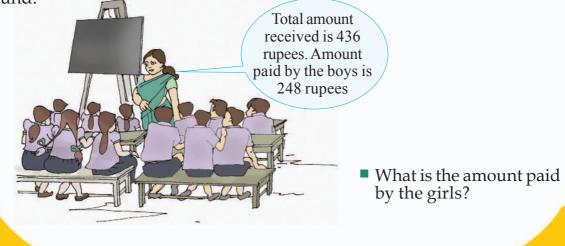
Hundreds	Tens	Ones	
1	7	5	-
1	5	6	

Hundreds	Tens	Ones	
1	6	15	_
1	5	6	
0	1	9	



## **Scholarship Fund**

All the students in Ammu's class donated to the school's scholarship fund.

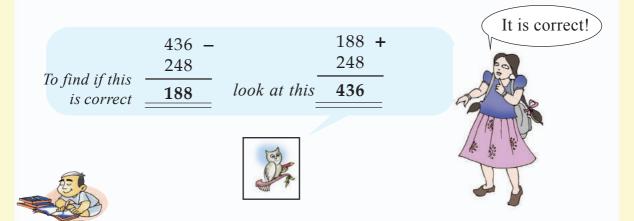


<ul> <li>How did you find it?</li> <li>Subtract 248 from 4</li> <li>What is the way?</li> </ul>	436.	We can't t away 8 ruped 6 rupees and rupees from rupees	es from d 4 ten n 3 ten
			436
3 ten rupees in 436 rupees. We can add 1 ten rupee with 6 rupees	400 + 30 + 200 + 40 +	000 + 40	
		Next 4 tens from 2 tens. There are 4 hundred rupees. Change one hundred into tens	
Then we can write it this way 200 -	+ 120 + 16 - + 40 + 8		
That is,			
400 + 30 + 6 -	400 + 20 + 16	- 300 + 1	20 + 16 -
200 + 40 + 8	200 + 40 + 8		40 + 8
		100 +	80 + 8

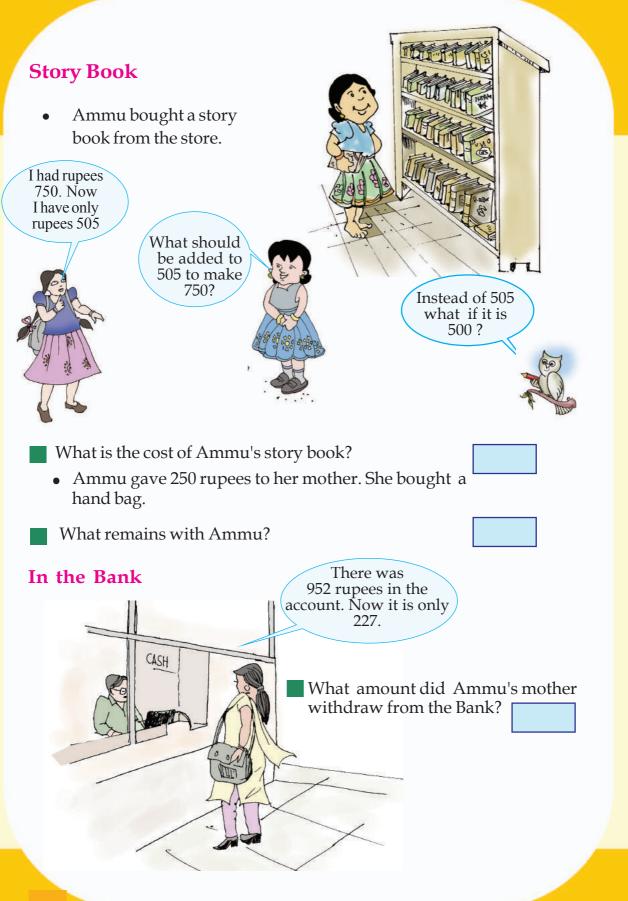
We can shorten these steps like this.

Hundreds	Tens	Ones		Hundreds	Tens	Ones	]
4	<b>2</b> 3	6	-	<b>3</b> 4	2	16	-
2	4	8		2	4	8	

Hundreds	Tens	Ones	In short, we	can write			
3	12	16	-		12	10	
2	4	8		3 4	2 3	16 6	-
				2	4	8	
1	8	8		1	8	8	

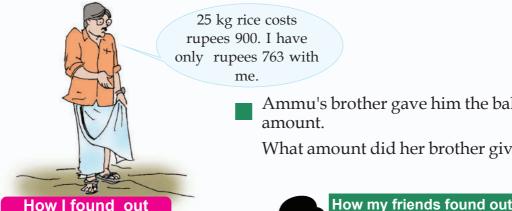


• Mother has 4 hundred rupee notes and 5 ten rupee notes with her. She gave 120 rupees to Anu. What is left with Anu's mother now? What are the notes with her?



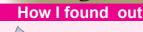
#### In the rice shop

Ammu's father went to the store to purchase rice.



Ammu's brother gave him the balance

What amount did her brother give?





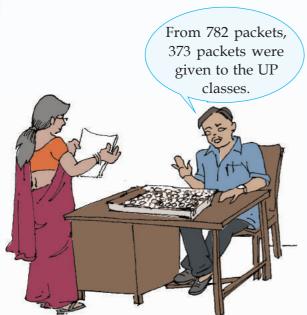
# Cricket

Ammu is watching cricket.



#### To the school

Vegetable seeds were brought from the "Krishi Bhavan" for distribution.





How many packets are left?

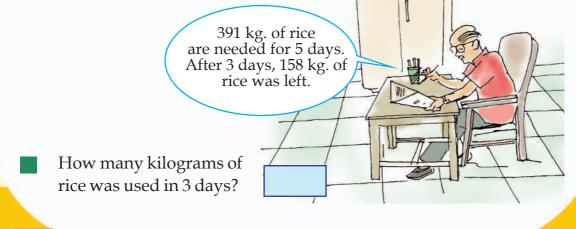
From the remaining, if 329 packets are given to 2, 3, 4, 5 classes, what will be left for class I?

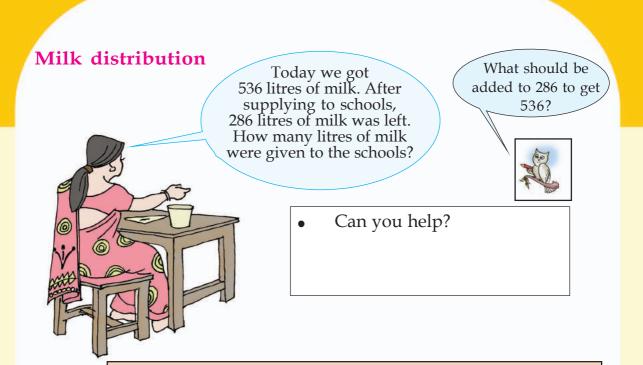


Of the 686 grains that the tiny ant collected, he gave 247 to the baby squirrel and 265 to the pretty parrot. How many grains are left with the tiny ant?

#### Mid day meal

Every day a nutritious meal is given to students in Ammu's School.





In the fruit shop, there were 325 apples in the morning. If there is 98 left, how many apples were sold?

#### Uniform

In a School, there is a stock of 167 metres of cloth for skirts and 118 metres of cloth for shirts. This year another 495 metres of skirt material and 345 metres of shirt material were added. After distribution, 178 metres of skirt material and 145 metres of shirt material were left. How much cloth was distributed this year?



- How you can find out?
- Can you write it in a table?
- What all need to be written?
- •

#### How I found out







I know what I have to find out.

I found and wrote what was needed in the table.

I know that the operations I did were correct.

I understand that there are several other ways too.

#### **Independence Day Rally**

In the rally conducted by Scouts and Guides and the Red-Cross, 296 boys and 336 girls participated. Of this, 186 were Scouts and 177 were Guides. Then, how many were from Red -Cross?









#### Science Fair

A Science fair was conducted at Ammu's school.

On the first day 386 persons and on the second day 637 persons had food.

On which day did more persons take food? By how much?

School Science Fair

1000 chairs were hired for the Science Fair. Due to some reasons, 186 chairs were returned. Find the number of chairs used.



Subtract 1 from 1000. Then subtract 186 from the answer. And then add 1.

1000 – 1	=	999
999 – 186	=	813
813 + 1	=	814
1000 - 186	=	814

Subtract 1 from 1000. Subtract 1 from 186. Subtract that answer from the first answer. Is this answer equal to the previous question ?

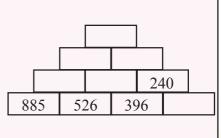
$$1000 - 1 = 999$$

186 - 1 = 185

999 - 185 = 814



Subtract the smaller number from the nearest big number and complete the number pyramid.





- Among the 240 notebooks with the School Society, half of them were sold. Find the number of notebooks left.
- Ramu bought brinjal for 545 rupees and lady's finger for 232 rupees. He sold the brinjal for 637 rupees and the lady's finger for 365 rupees. Find the profit from each sale. What was the total profit?
- Ammu bought some household things from Babu store for 903 rupees. Anu bought the same things from Maveli Store for 784 rupees. Which is the best purchase? By how much?
- PTA bought 840 laddus for the Independence Day celebrations. The number of students in the first standard is 89, second standard 93, third standard 87, fourth standard 98 and in the fifth standard 102.

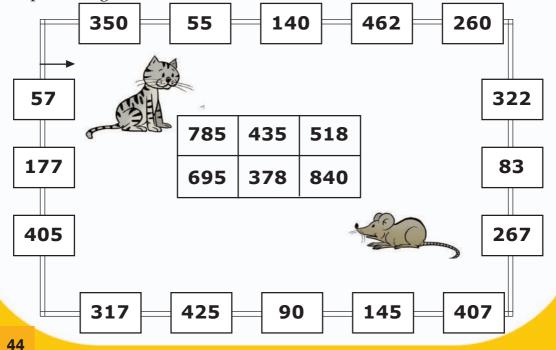
If one laddu is given to each student, find the number of laddus left.

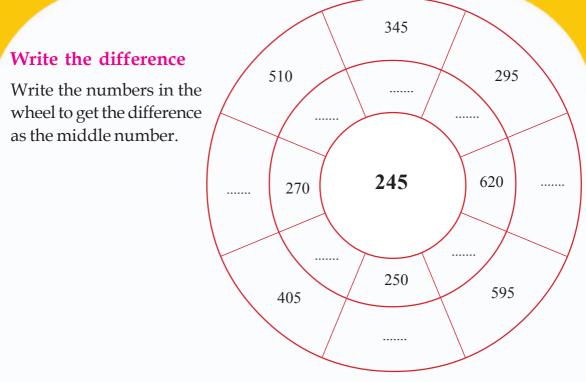
Find the number of laddus needed more to distribute two laddus each to every student.

• In a UP School, the number of students in the LP section is 292 and 345 in the UP section. Among them 349 are boys. Find the number of girls in the school. Who are more in number, boys or girls? By how much?

#### Rat and Cat

Kandan cat is running to catch Manian rat. Manian can escape through the wall around. One number noted on the wall is not the difference of the numbers given in the middle. Find the number and help him to escape through this.





#### LOVE

0	1	2	3	4	5	6	7	8	9
0	L	2 D	L	А	D	Y	Е	V	Е

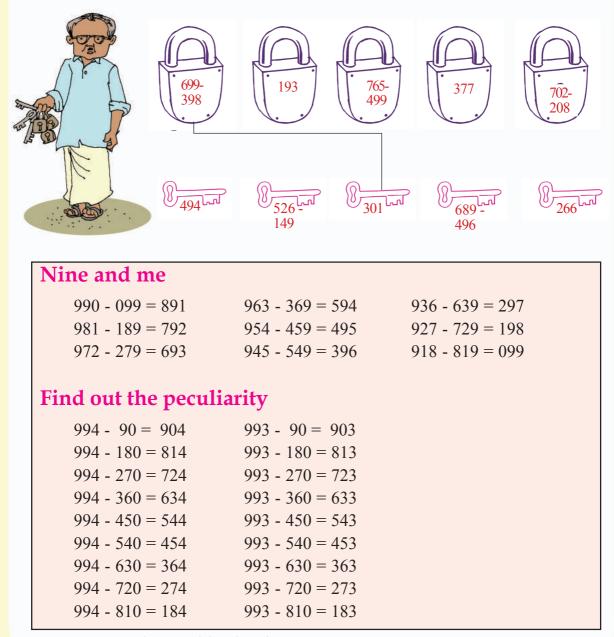
- Write a three digit number without repeating the digits and without zero.
- Write this number in the reverse order.
- Subtract the smaller number from the bigger one.
- Write the answer you got in the reverse order.
- Add this reversed number to the above answer.
- Try to write the letters according to the digits of the last number.

#### Complete the number pattern

- 1. 100, 90, 80, ....., ..... 2. 128, 0
- 3. 900, 800, 700, ....., ....., .....
- 2. 128, 64, 32, ....., ....., .....
- 5. 300, 250, 200, ....., ....., .....
- 4. 780, 680, 580, ....., ....., .....
- 6. 350, 290, 240 ....., ....., .....

#### Locks and Keys

It was found that the locks and their keys were interchanged. Answer the questions in the locks and keys. Then you can open them.



Prepare a similar one like the above.



# When Shapes Join



Look at the picture.

Can you say what are the geometric shapes in the picutre?

Which of them are rectar	ngular in shape?	 	
Circular shape?		 	
Triangular shape?		 	

# Let's give colour

Look at Appu colouring.

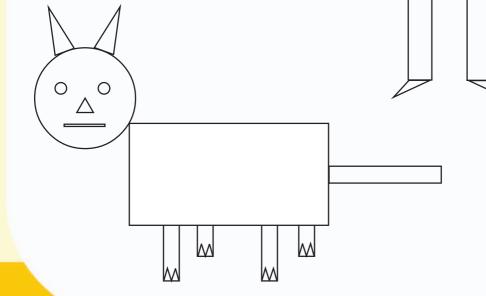


Ο

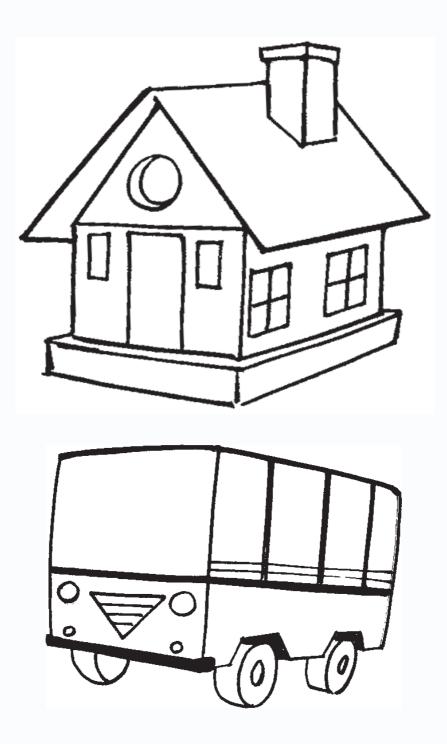
 $\bigcirc$ 

Colour the pictures given below.

Give blue colour for triangles and red for rectangles.

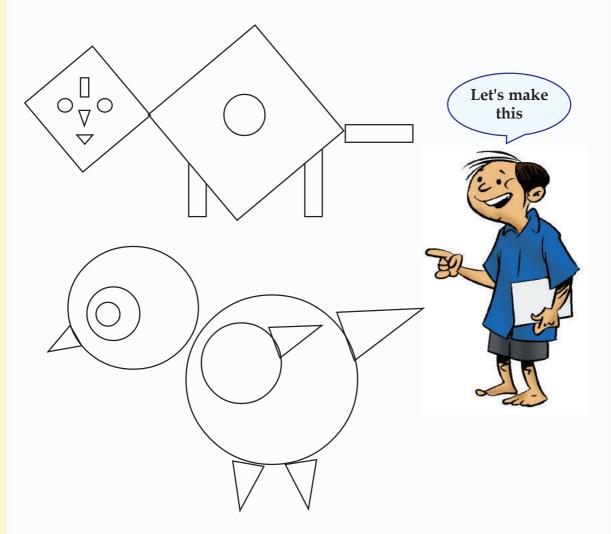


Give different colours to the pictures and make them beautiful.



# Let's join shapes

We can join shapes to make pictures. Take the suitable shapes from the Mathematics Lab to make the pictures given below.

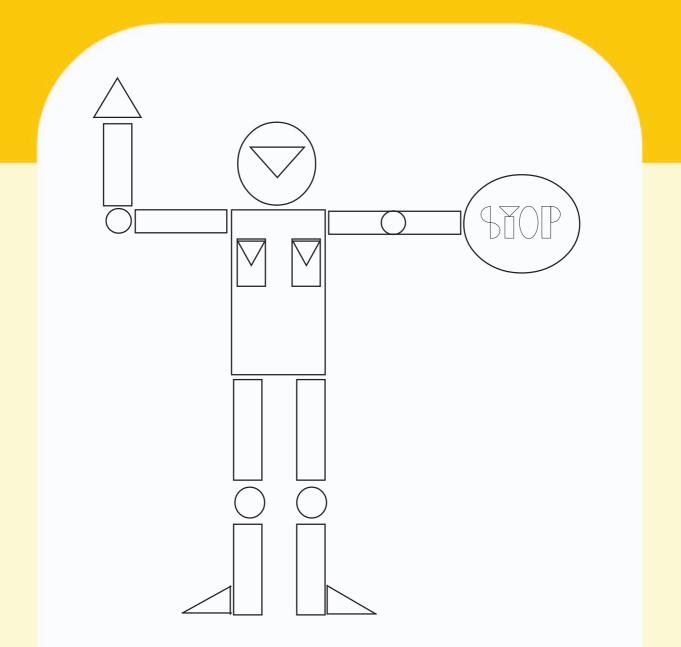


#### We can draw Mathematical Shapes

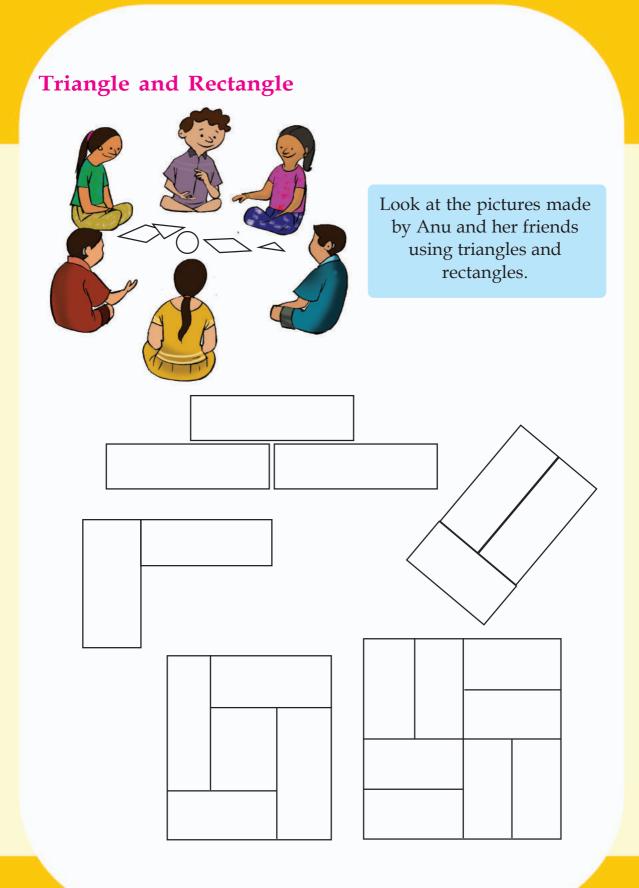


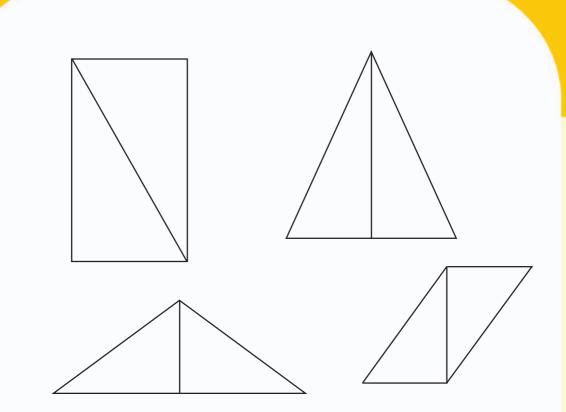
Software for the purpose: Tux Paint in IT@School GNU/Linux. How to open the software,

 $\operatorname{Applications} \to \operatorname{Education} \to \operatorname{Tux}\operatorname{Paint}$ 



• Count and write the number of rectangles, triangles and circles in the above picture.





Let us also draw like this.

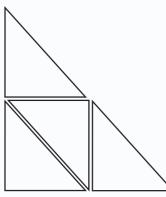
We need rectangles and triangles.

We can take these shapes from the Mathematics Lab.

We can use them to draw different shapes.

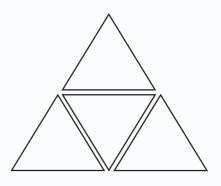
Give colours you like and exhibit them.

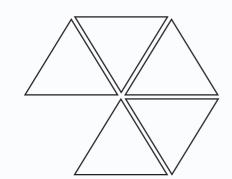


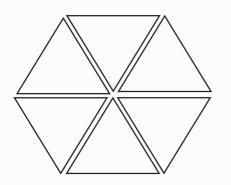


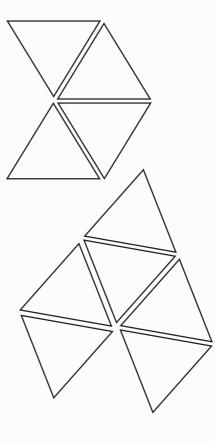
Look at the shapes made by Vinu and his friends.

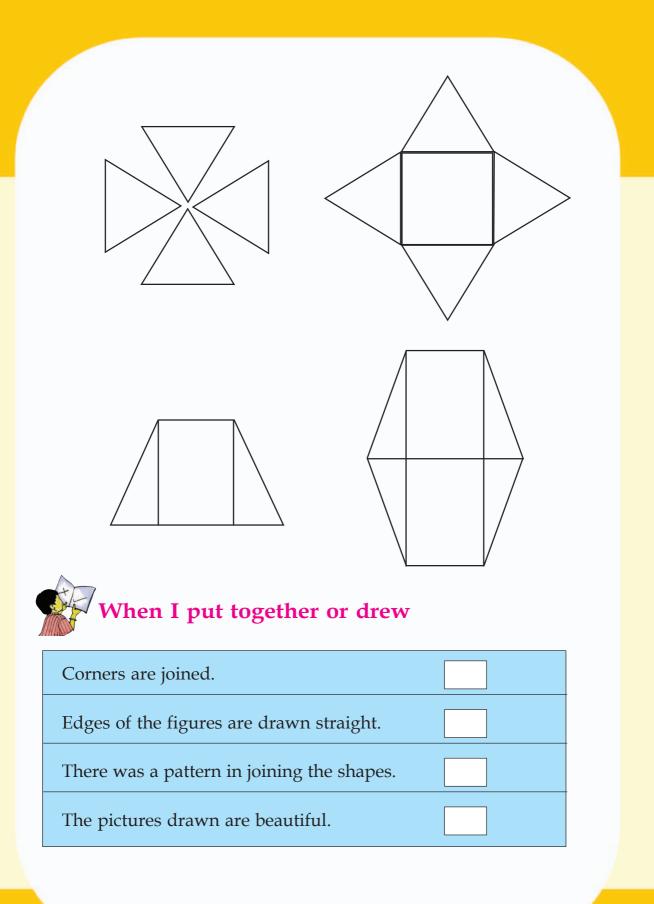
We can make and draw many shapes by joining triangles and rectangles. Colour these pictures and make it beautiful.

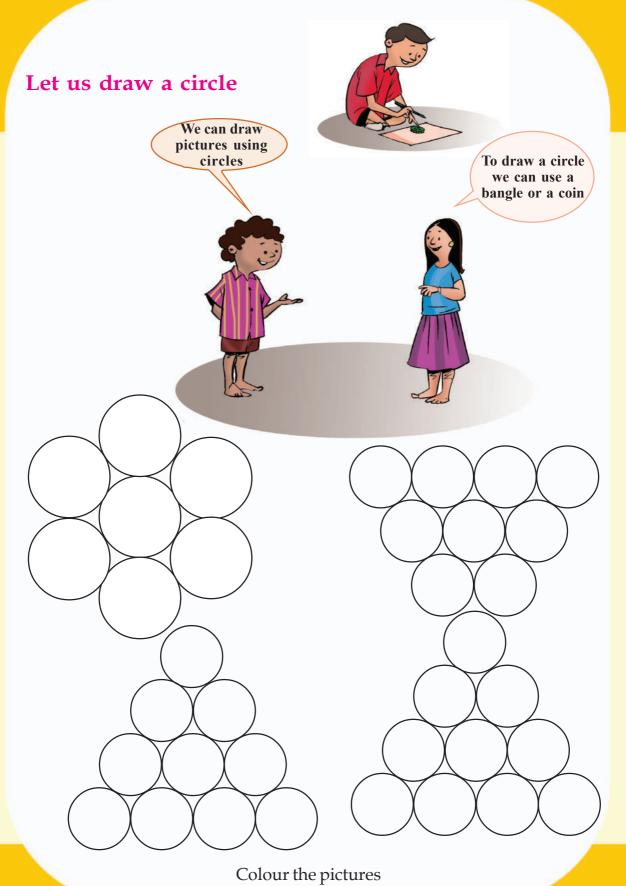


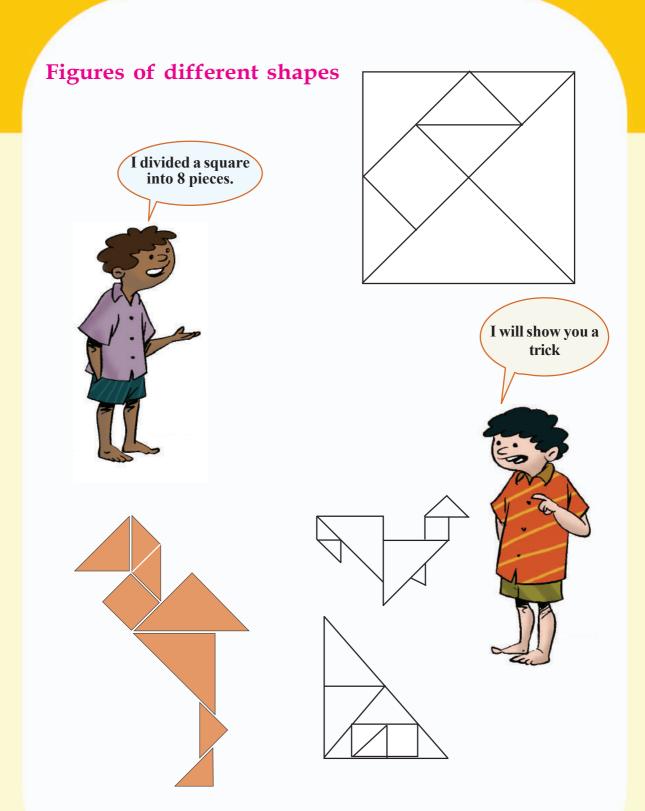








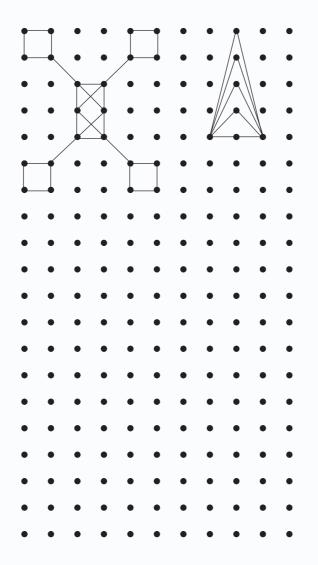




By joining these 8 pieces, let us try to draw the pictures given above. Try to draw more pictures.

# Draw, draw and draw again!

- See the pictures drawn by joining the dots.
- Draw pictures of your choice by joining the dots.

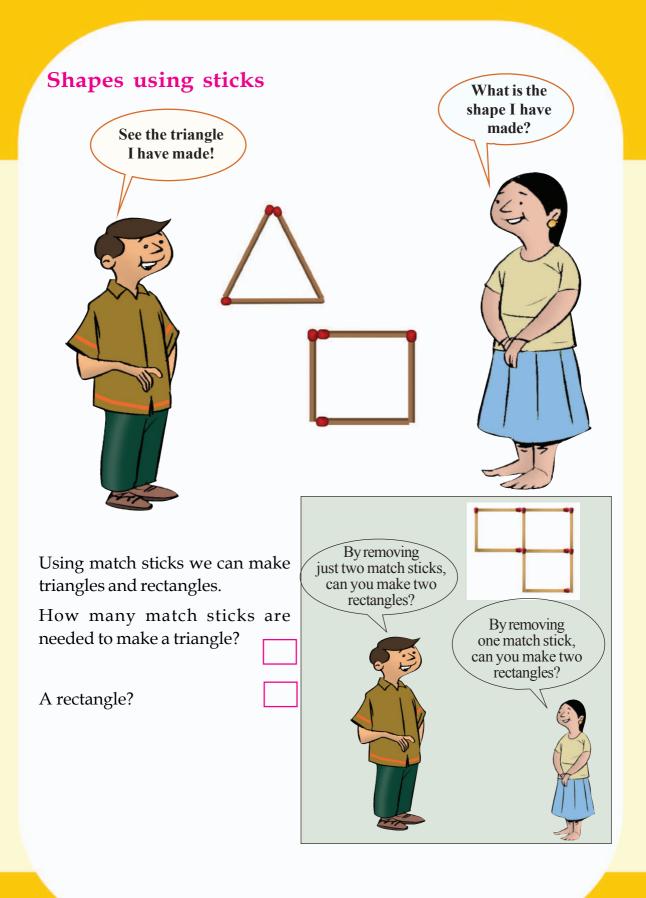




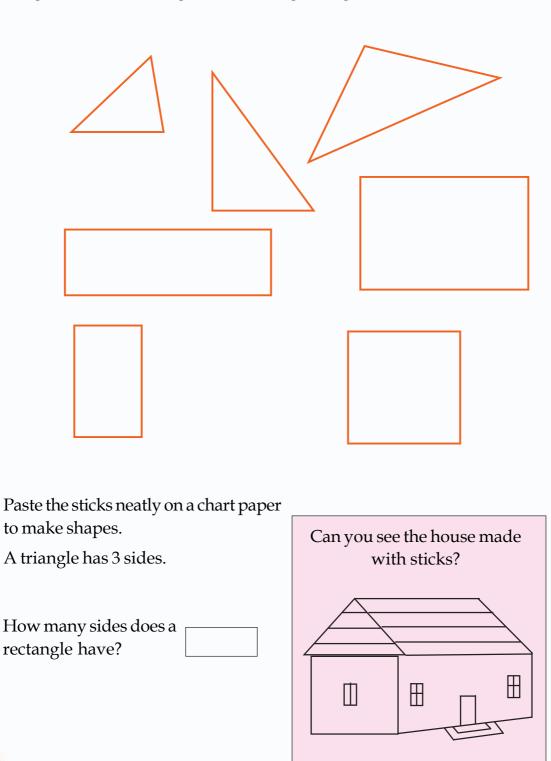
#### **Constructions using Mathematical Shapes**

Software for the purpose: GCompris in IT@School GNU/Linux. How to open the software

GCompris  $\rightarrow$  Puzzles  $\rightarrow$  The tangram puzzle game

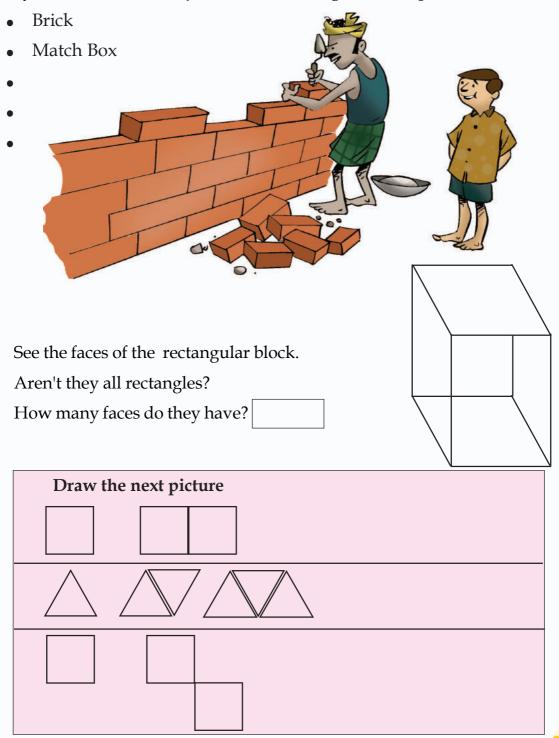


Using sticks, make triangles and rectangles as given below.



# **Rectangular Blocks**

Try to write names of objects that are rectangular in shape.





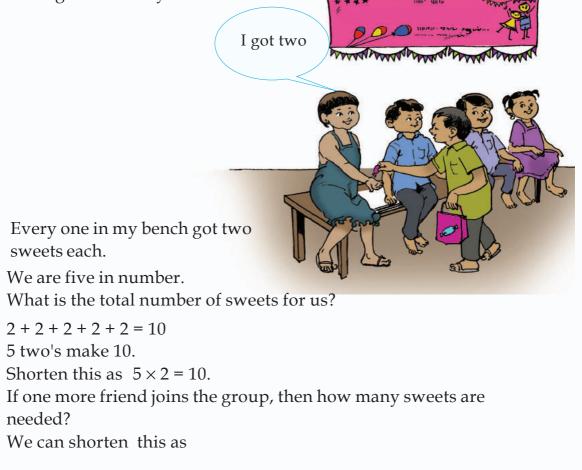
Can you make such models? What all toys can you make by folding paper? Don't forget to teach your friends too!

Notice the shapes formed when you fold the paper each time.

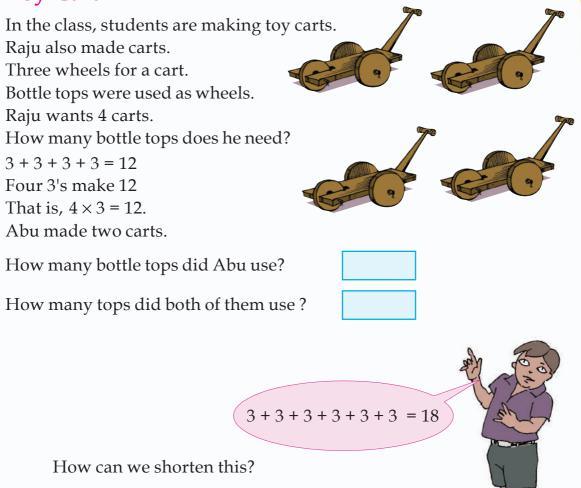


# **School Re-Opening Festival**

New friends arrived. Sweets were given to every one.



#### **Toy Cart**



.....×..... = .....

#### In Groups

For doing the activities in the mathematics lab the teacher arranged the students into groups.

There are 4 students in one group.

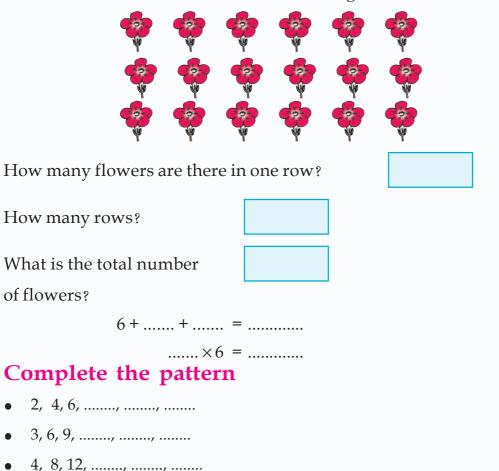
Total number of groups is 6.

What is the total number of students?

 $4 + 4 + 4 + 4 + 4 + 4 = \dots$  $6 \times 4 = \dots$ 

## How many Flowers?

In the Mathematics lab the students arranged the flowers as below.



- 5, 10, 15, ....., ....., .....
- 6, 12, 18, ....., ......

# Addition and Multiplication

Complete the table

	Three 4's make 12	3 × 4 = 12
		4 × 3 = 12
6 + 6 = 12		
	Six 2's make 12.	

# Let us find

The cost of a pencil is 2 rupees. Find the cost of 10 pencils.	10 × 2	= 20
A packet contains 6 candles. Find the number of candles in 4 such packets.	$4 \times 6$	=
For stitching uniform, 3 metres of cloth is needed for a child. How much cloth is needed for 5 children?		=
What is the amount needed to buy 5 notebooks		
each costing rupees 5 ?		=
	$3 \times 4$	=
Cost of a pen is 6 rupees. Find the		
cost of 6 pens.		=

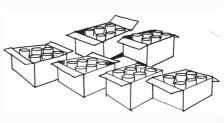




- Ramu planted plaintain trees. Three trees in one row. What is the total number of trees in 6 rows?
- We can arrange 4 chairs around a table. How many chairs are needed to arrange around 4 tables?
- Glasses were purchased to distribute milk for the students. 5 boxes were purchased with 6 glasses each. Find the total number of glasses bought.

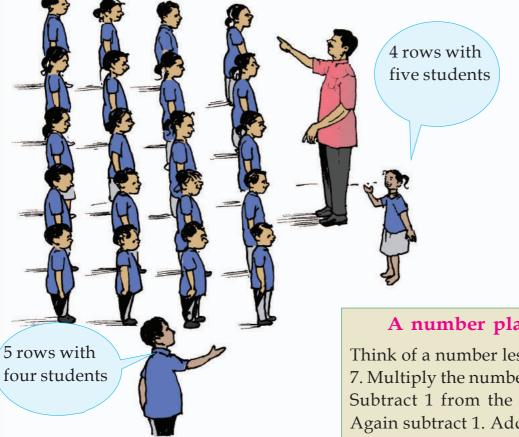






# If order changed

The teacher is training the students who are participating in a sports meet.



What is the total number of students? Four 5's make

> $5 + 5 + 5 + 5 = \dots$  $4 \times 5 = \dots$

Five 4's make

 $4 + 4 + 4 + 4 + 4 = \dots$  $5 \times 4 = \dots$ That is,  $4 \times 5 = 5 \times 4$ 

#### A number play

Think of a number less than 7. Multiply the number by 3. Subtract 1 from the result. Again subtract 1. Add these three numbers.

- Find the sum of the • digits in the answer.
- What did you get? •
- Repeat the play with • other numbers.
- What is the trick in the answer?

#### How many dots?

How many rows?



Added or Multiplied

When three different numbers are added or multiplied, the answers are the same. Find the numbers.

How many dots in one row?

What is the total number of dots?

6+6+6+6+6=.....

If we consider the columns, then

 $5 + 5 + 5 + 5 + 5 + 5 = \dots$ 

That is,

 $5 \times 6 = 6 \times 5$ 

$$5 \times 6 = \dots \times \dots = \dots$$

# Try these

 $5 \times 4 = 4 \times 5$  $3 \times 2 = 2 \times 3$  $4 \times 3 = \dots \times \dots$  $\dots \times \dots = \dots \times \dots$ 



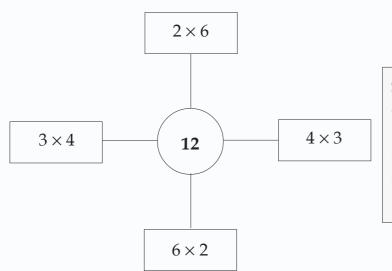
#### Let's Multiply

Software for the purpose : GCompris in IT@School GNU/Linux. How to open the software,

 $GCompris \rightarrow Mathematics \rightarrow Go$ to calculation activities  $\rightarrow$  Go to Algebra activities  $\rightarrow$  Practice the multiplication operation

# Different ways.

12 is written as different groups. Look at these.



Saju bought 5 pens each costing 10. How many 5 rupee notes should he give to the shop keeper?

If it is 10 rupee notes...?

Similarly can you write 20 in different ways?

# Appu's Magic

Think of a one digit number. Multiply it by 2.

Then again multiply by 5. Add 10.

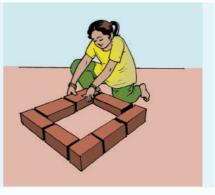
Give the answer. I will tell the number you thought." Have you got Appus' trick?



Factor Number Munchers Software for the purpose : GCompris in IT@School GNU/ Linux

 $\begin{array}{l} \text{GCompris} \rightarrow \text{Mathematics} \rightarrow \text{Go to} \\ \text{calculation activities} \rightarrow \text{Go to Number} \\ \text{Munchers} \rightarrow \text{Factor Number Munchers} \end{array}$ 

How can we arrange 8 bricks in different ways?



#### **Complete the boxes**

What is the peculiarity of the numbers in the white boxes?

Now complete the blank boxes.

Find and write the patterns from the boxes.

×	1	2	3	4	5	6
1	1					
2		4				
3			9			
4				16		
5					25	
6						36

Write the numbers in the coloured boxes.Find the sum of the numbers against each number.

What is the peculiarity of these numbers? Write the numbers in other boxes and find their sum.

×	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

#### Let's find the product



Software for the purpose : GCompris in IT@School GNU/ Linux. How to open the software,

#### **Complete the table**

From the previous table, write the groups of 3.

 $1 \times 3 = 3$   $2 \times 3 = 6$   $3 \times 3 = \dots$   $= \dots$  $6 \times 3 = \dots$ 

We can write the groups of 4 and 6 as

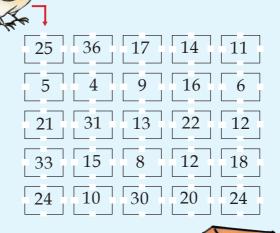
 $1 \times 4 = \dots$ = ..... = .....  $6 \times 4 = \dots$ 

#### Way Home

Help the hen reach her house through the number boxes which are the answers of the problems given below.

$5 \times 5$	$3 \times 2$	$5 \times 3$
6×6	$4 \times 3$	$5 \times 2$
$2 \times 2$	$6 \times 3$	$6 \times 5$
$3 \times 3$	$6 \times 2$	$5 \times 4$
$4 \times 4$	$4 \times 2$	$6 \times 4$

	=	
	=	
	=	
	=	
6 × 6	=	



#### **School Store**

Look at the Price List displayed in the school store.

- Manu bought 4 notebooks ° Item and 4 pens. What is the Price total cost? Pen ......6 rupees Pencil ..... 5 rupees Maya bought 5 pencils and 2 sharpeners. What is Sharpener..4 rupees the total cost ? Eraser ...... 3 rupees Notebook10 rupees • Rahim bought 3 pencils Ruler ......2 rupees and 2 erasers. What is the total cost? 2 Dennis bought 2 notebooks and 3 rulers. What is the total cost? • Shefi has rupees 24 with her. What and how many items can she buy?
- Jameela teacher bought 4 each of all the items from the store. What amount did she give ?

Based on the above Price List, prepare questions to ask you friends.

#### How I found out





# **Football Match**

For watching a football match, some friends started in 4 cars and 3 autorickshaws. In each car 5 persons and in each autorickshaw 3 persons. How many persons went for watching the match?

#### How many toy carts ?

Appu is making toy carts. Wheels are bottle tops. He made carts with 2 wheels, 3 wheels and 4 wheels.

Altogether he used 30 bottle tops.

How many toy carts did he make with two wheels?

Three wheels? Four wheels?

# School Bus

Sabu counted the number of students in the school bus. " 6 seats on the right with 3 students each. 5 seats on the left with 2 students each. 4 including myself are standing." What is the total number of students in the bus? In the next stop, students got down from 2 seats on the right and 3 seats on the left. Now how many students are left in the bus?





- I bought 6 packets with 3 biscuits each . What is the total number of biscuits I bought?
- When the teacher divided the students into 5 groups of 4 each, one student was left out. When they were divided into 4 groups of 5 each, then also one student was left out. What is the total number of students?
- When 5 benches were occupied, each by 5 students, 5 were left out. Then how many students are there altogether? If each bench is to be occupied by 5 students with no one left out, then how many benches are needed?
- Ragi bought 4 notebooks and 6 pens. Cost of a notebook is 6 rupees and that of a pen is 3 rupees. For her brother, she bought 6 pencils each costing 2 rupees and 4 notebooks costing 5 rupees each. If she gave 100 rupees to the shopkeeper what amount did she get back?

#### Mary's U.P. School

In the School, 201 students were studying in the first standard, 14 students less than the first standard is in the second standard, 186 students in the third standard and in the fourth standard 18 students more than the number of students in the third standard. 195 students study in the fifth standard.

Which class has the most students? Find the total number of students in the LP Section.

Among the 213 students in the sixth standard, 114 were girls.

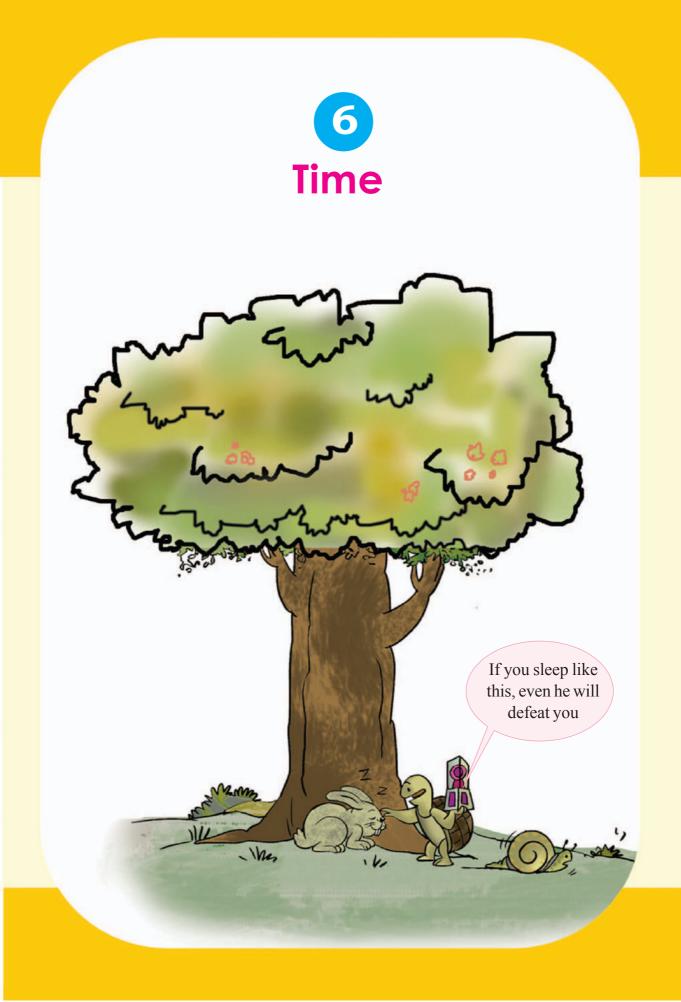
Seventh standard has 19 students more than the sixth standard. Number of boys and girls are equal in the seventh standard.

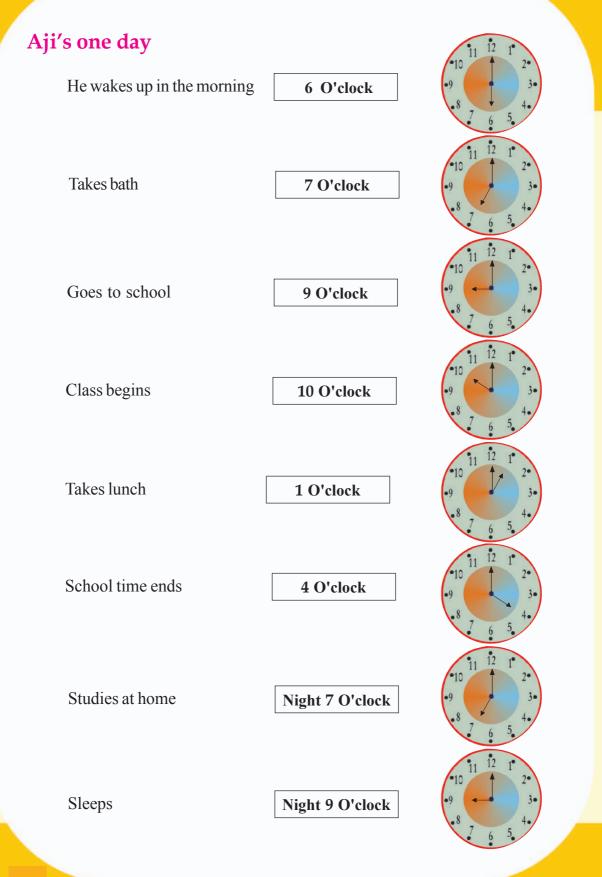
Eighth standard has 37 students less than the seven standard. There are 105 boys in the 8th standard.

Who are more in the U.P section, boys or girls? By how much?

What is the total number of students in the U.P section? Let us write this in a table.

Based on the table prepare questions to ask your friends.









- What do you do in a day?
  - Wake up in the morning
  - Take bath
  - Study
  - Read news paper
  - Take breakfast
    - Go to school
    - Participate in the school assembly
  - Participate in the learning activities
  - Take lunch
  - Sing National Anthem
  - Play in the evening
  - Study at night
  - Write diary
  - Sleep
- What does your mother do in a day? Ask your mother.



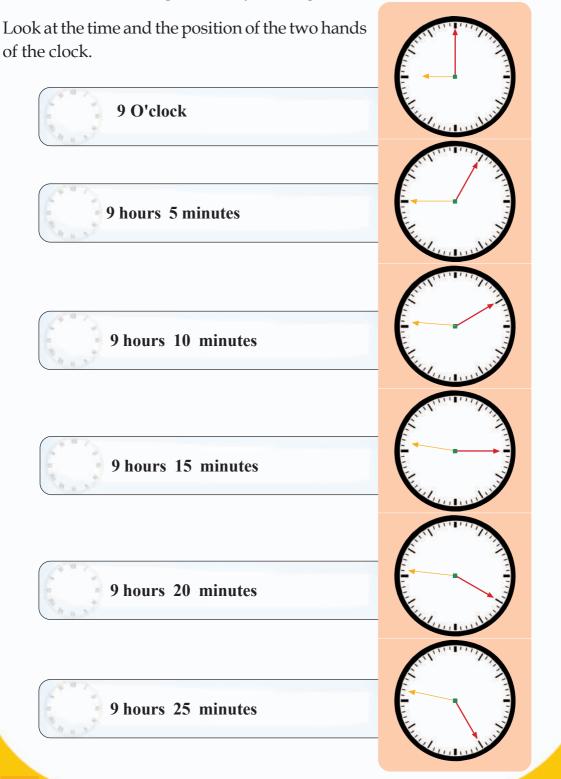


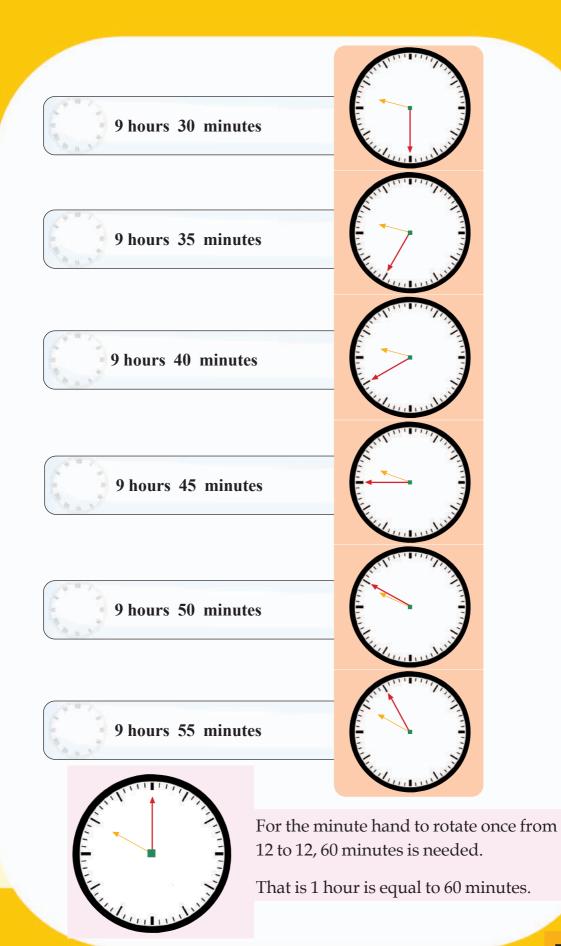




## Time

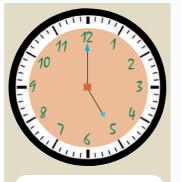
Doesn't your mother ask you to get ready for school by looking at the clock? Doesn't the school ring the bell by looking at the clock.

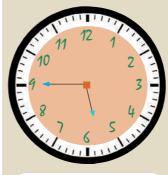


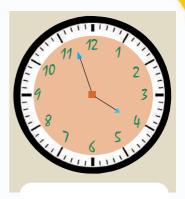


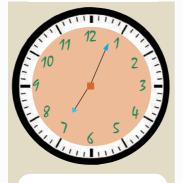
My day	
I wake up at	7 O'clock and complete my routine work before
an	d drink tea. After I start for school. After 2
periods there is	a small interval. Lunch break is between
and	. The school ends at and I reach home
before	. At I read my lessons and sleep at
	<image/>

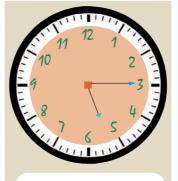
# Can you write the time below?

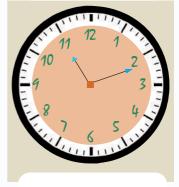


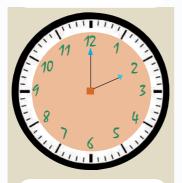


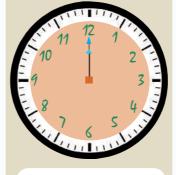


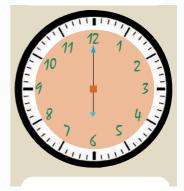




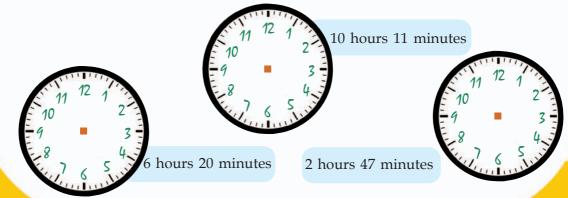






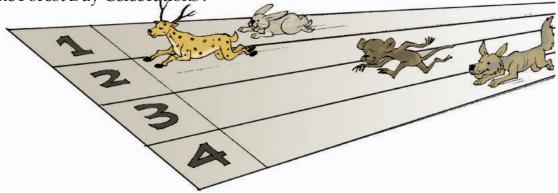


Draw the two hands of the clock



# Jungle Olympiad

A running competition is being conducted in the forest in connection with the Forest Day Celebrations .



Chinnu Deer completed the race in 1 minute and Chinthu Rabbit in 2 minutes. While Chinju fox completed in 3 minutes, Chindan monkey took 4 minutes.

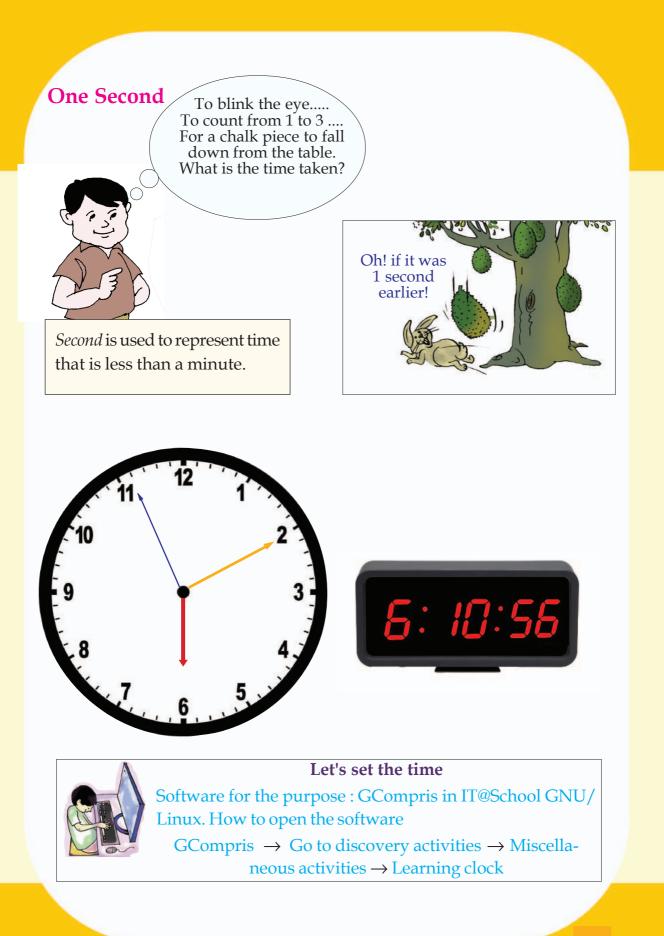
The competition started at 10 O'clock in the morning. Note the time taken by each of them.

Chinnu deer	-	10 hours 1 minute
Chinthu rabbit	-	10 hours 2 minutes
Chinju fox	-	10 hours 3 minutes
Chindan monkey	-	10 hours 4 minutes

We can show these times in clocks.



ChinnuChinthuChinjuChindanImage: Chindu (Chindu (

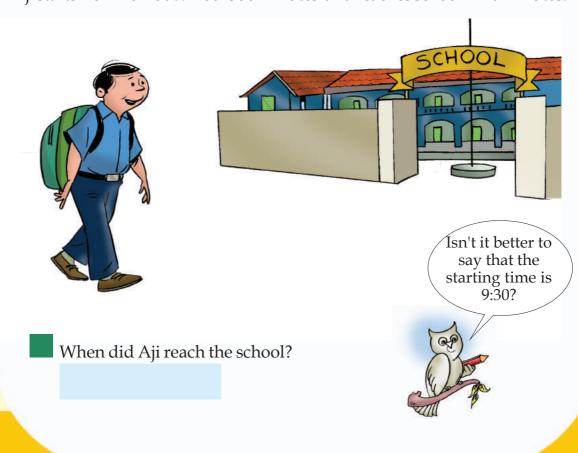


### How many hours?

- From 6 O'clock in the morning to 6 O'clock in the evening.
- From 10 O'clock in the morning to 4 O'clock in the evening.
- From 6 O'clock in the morning to 1 O'clock in the afternoon.
- From 12 noon to 12 midnight. hours
- 7 O'clock in the morning to 7 O'clock the next morning.

#### My distance and time

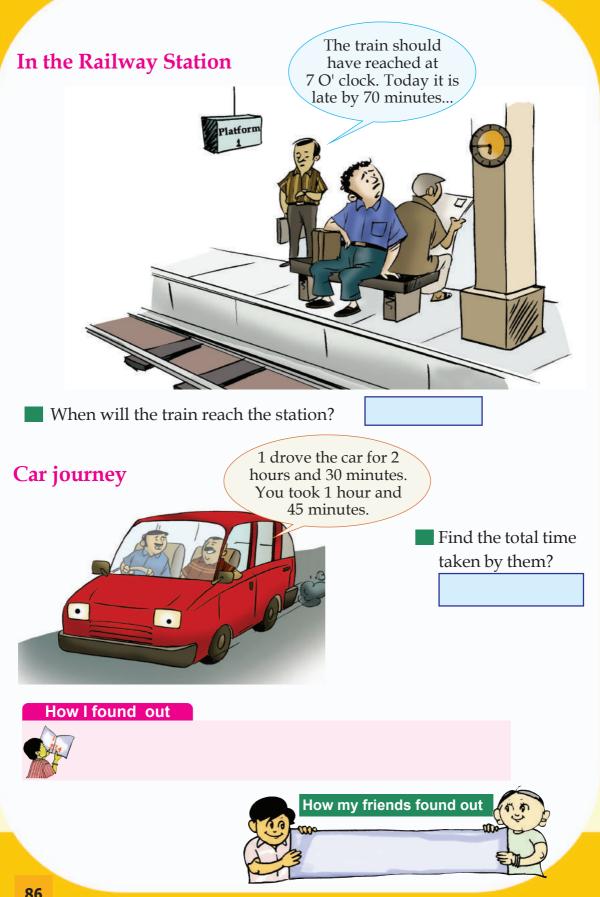
Aji starts from home at 9 hours 30 minutes and reaches school in 20 minutes.





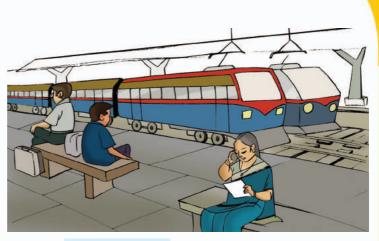
• Write the time taken by your friends to travel from their homes to school?

Sl.No.	Name	Departure time	Arrival time	Time taken
1				
2				
3				
4				
5				
School	Anniversary		Excellent sy He started a Now he has sy 40 minu	t 10:30.



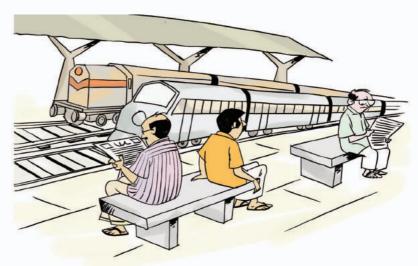
### Journey by train

Venad Express starts at 5 in the morning from Thiruvananthapuram railway station and reaches Shornur station by 12:45 in the after noon.



What is the total journey time?

#### Who is first?



A train starts from Thiruvananthapuram at 7:30 in the morning and reaches Ernakulam at 11:35 in the morning via Alappuzha. Another train starts from Thiruvananthapuram at 5 O'clock in the evening and reaches Ernakulam via Kottayam at 9:55 in the night.

- Find the time taken by each train to travel from Thiruvananthapuram to Ernakulam?
  - What is the difference in time?

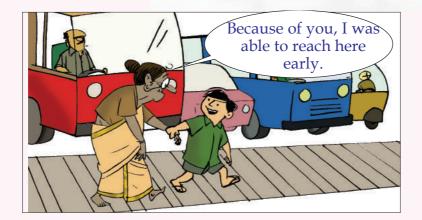
### **Study Tour**

Vijayamma teacher explained the tour like this.

We will be starting at 7:30 in the morning. After an hour, we shall reach the dam. We have an hour for sight seeing. From there, we will reach the Zoo after 30 minutes. We will see the birds and animals there. After spending 2 hours in the Zoo, we will travel 30 minutes to reach the Science Museum. We have one hour to see the Museum. After a lunch break of 45 minutes and we shall travel another 45 minutes to reach the History Museum. We will spent an hour in the History Museum and then travel 15 minutes and reach the beach. You can spent two hours there. Then we will return to our school by travelling one hour.

study Tour

- Have you listened to the teacher? We can write this plan in a table.
- The journey time and time spent in each place can be noted separately.



# Journey time

Departure place time	Arrival place time	Time taken for the journey
School 7:30	Dam 8:30	1 hour
Dam 9:30	Zoo 10:00	

# Visiting time

Arrival time	Departure time	Time spent
Dam 8:30	9:30	1 hour
Zoo 10:00		

When did they reach the Science Museum?

When did they have their lunch?

Based on the table above, make questions to ask your friends.

### **Working hours**

Three persons mentioned the time taken by them to complete the same work in different ways.



Who worked more time?







Understood, what to find out	
Calculated time using hour - minute relations	
Could explain the method of finding the time	

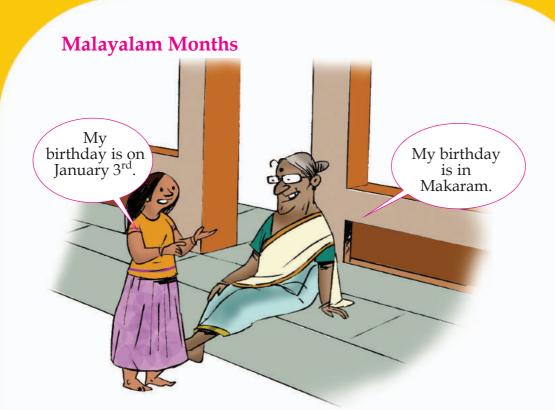
## Let's find out

- In which month is your birthday?
- Which is the first month of the year?
- In which month does your school open after summer vacation?
- Which are the months of this year with 5 sundays?
- On which day will we celebrate our Independence Day this year?
- Which is the month with number of days less than 30?
- Find the number of months with 31 days?
- How many months have 30 days?
- What is the total number of days this year?

### Celebrations

• Write the names of the month in which we celebrate the following

	Celebration	English month
This year's Onam is in	• Onam	
August or	Christmas	
September?	• Vishu	
	• Bakrid	
	• Independence Day	
THE PARTY OF THE P	Republic Day	
	Gandhi Jayanthi	
a min the	• Children's day	
	Kerala day	
	• Teacher's Day	
	• Environment Day	
	•	
	•	



- In which Malayalam month is Minnu's Birthday?
- Using a calendar, write the names of Malayalam months and English months in the table below.





### How can we say?

Write the time required for the following.

A plant to grow into a tree Years
The school re-opens after summer vacation
Egg hatches into chicks
Fruits from flowers Days
The sun rises in the morning and sets in the evening
Return home from school
Sings morning prayer in the school
Takes breakfast
Count from 1 to 50
A frog to jump once

# Looking back

Learning achievements	I can do it	Teacher's help is needed	Needs improvement
Chapter 1 - Hundred and above			
Read numbers upto 999			
• Explain numbers upto 999 in different ways			
• Expand a number using place value			
• Using three digits, make three digit numbers			
• Find smaller/ larger from three digit numbers			
• Arrange three digit numbers in the ascending/ descending order			
• Use numbers to represent positions			
• Use numbers for problem solving			
• Explain the logic in the number sequences and find new number sequences.			
Chapter 2 - We can add			
• Represent a number as the sum of different numbers			
• Explain different methods of adding numbers to a three digit number.			
• Use addition to solve practical problems			
• Explain different methods of problem solving			

Learning achievements	I can do it	Teacher's help is needed	Needs improvement
• After verifying the properties of numbers, make conclusions regarding number relations			
• Explain the logic in the number sequences			
Chapter 3 - To take away			
• Explain different methods of subtracting numbers			
Use subtraction to solve practical problems			
• Explain different methods of problem solving			
• Justify the method of verifying the operation subtraction			
• Make conclusions regarding the properties of numbers			
• Explain the logic in the number sequences			
Chapter 4 - When Shapes Join			
• Recognise rectangles, triangles and circles from the surrounding			
• Make different figures using rectangles, triangles and circles			
• Make different figures using Tangram			
Make three dimensional objects			
• Take measures accurately and precisely			

Learning achievements	I can do it	Teacher's help is needed	Needs improvement
Chapter 5 - If Alike Joins			
• Form multiplication concepts from practical situations			
• Use multiplication concepts to solve problems in practical situations			
• Use multiplication to solve practical problems			
• Find number relations using multiplication concept and explain.			
Chapter 6 - Time			
• Tell time by looking at the watch/ clock			
• Find the time span between two time periods			
• Explain the hour - minute relationship			
Construct time table for planning			
• Find dates and important days in English/ Malayalam months using a calendar.			