# **MATHEMATICS**

Standard III

Part - I



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

#### 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 asisa mage,
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.

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My dear students,

Numbers, figures, patterns!

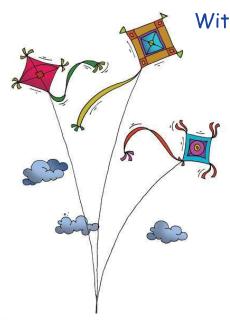
We have entered into a new world of mathematics.

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

SCFRT Kerala

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# 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.

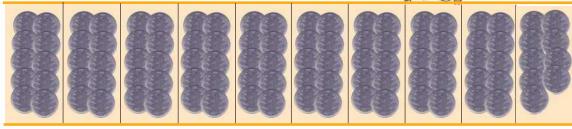
Boxes to collect donations for the school were given to every student.

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?

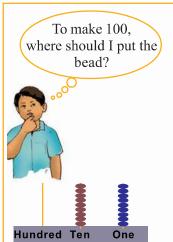
Athira's mother gave her one more 1 rupee coin.

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?



# 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?

199 91		100 + 1 = 101
. m 21		100 + 2 = 102
	999	100 + 3 = 103
	9999	
	99999	
	999999	
	9999999	
1 20 21	0000000	
STORY OF THE PARTY	999999999	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.

1000 - 200 2 of m.	100	
1000 - Third and 1000 -	200	
100   100	300	Three Hundred
4 Hundred	400	
5 Hundred		Five Hundred
6 Hundred		
	700	
	800	Eight Hundred
9 Hundred		Nine Hundred
	1000	
T 4 1 4 19		

10 Hundreds is equal to Thousand



# Let us plant saplings

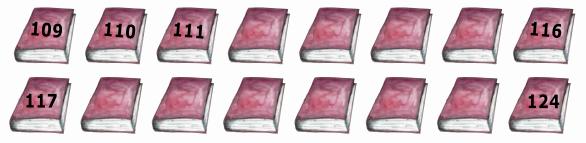
As part of the anniversary celebrations, 100 saplings are to be planted around the school. How many saplings each can be planted?

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?

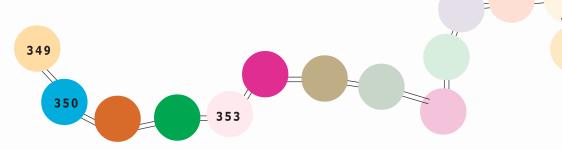
# How many numbers?

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.



Students in the camp were given number badges.

Athira's badge number was 148.

Salim got his badge before Athira and Annie got her badge after Athira. What are their badge numbers?

Salim	Annie	
Julilli	runc	

What is the badge number that was after Annie?

Badges were given to 20 students after Athira. What is the number of the last badge given?

### 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

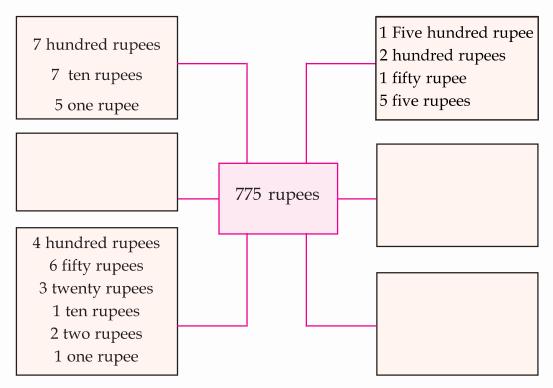
The amount collected last week as donation is given in the table below. Fill the empty boxes.

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



# **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				oins	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.

# 

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

# Smaller? Larger?



Which is the smallest number among those given above?

Which is the largest number?

Arrange the numbers from larger to smaller.

How did you do it? Explain.

#### How much less?

Teacher asked to write a number with 6 hundreds and 4 tens. But Sunanda wrote the number with 4 hundreds and 6 tens. What is the difference between the original number and the number written by Sunanda?

# 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?



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?

Without repeating any of these numbers, how many 2 digit numbers can be written?



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

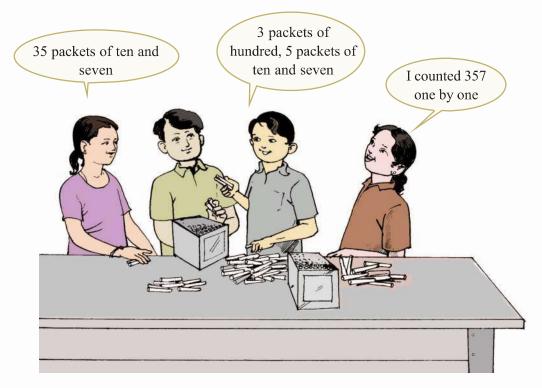


### Number of notes

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

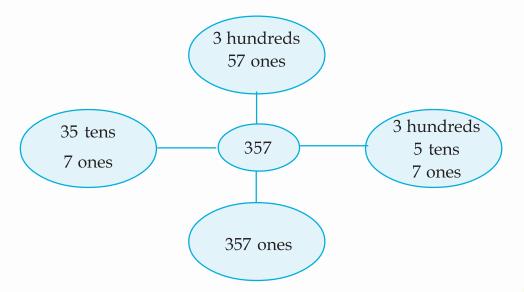
## Count the chalks

The children counted the chalks they made.

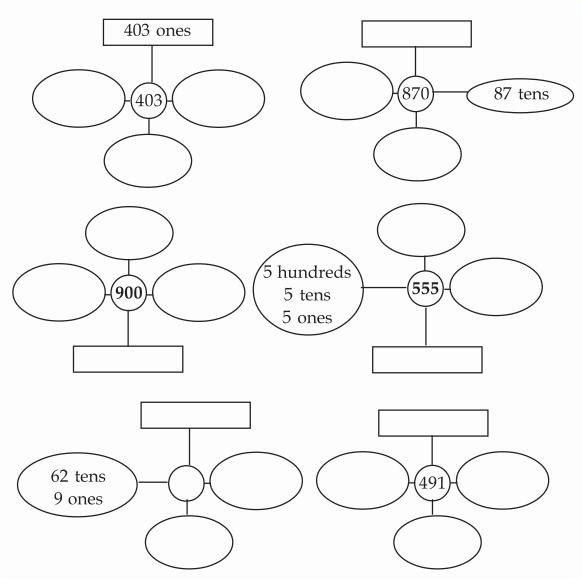


All got 357.

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

- 330, 340, 350, ....., , .....
- 575, 600, 625, ....., .....
- 950, 900, 850, ....., .....
- 203, 313, 423, .....

## 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?







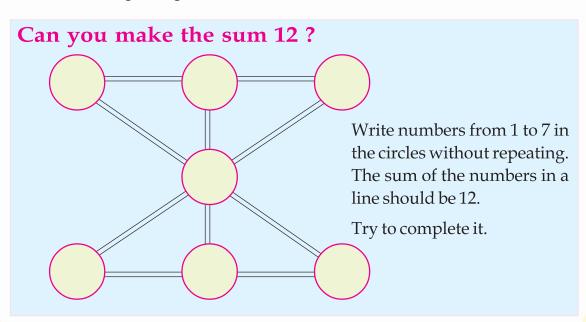
### 50 Rupee note

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
200	300	100

400	

- 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.

2

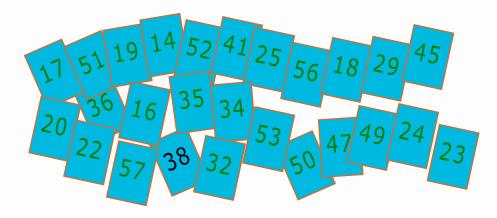
### Let us add

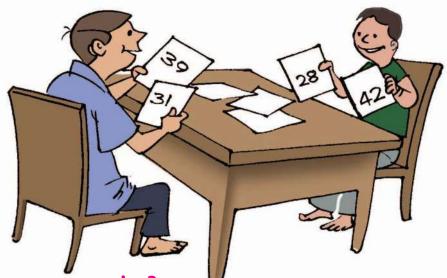
2 5 1 9 + 6 5 4 1 2 5 6 3 4 7 9 8 6 5 4 3 1

• What about the next pattern.

2 2 2 2 2 2 2 2 2

# We can Add





# 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?

#### How we found out

# My thought

Tommy and his mother went to the shop.

They bought fruits for 100 rupees.

How did Tommy think of giving the

money?

$$56 + 44 = 56 + 40 + 4 = 100$$

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



Banana costs rupees 56 and lemon costs rupees 44.

Total 100 rupees

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?

ry	to	mal	ke a	a	similar	one	with	9	consecutive
um	ıbeı	rs.							
-							•		

128	121	126
123	125	127
124	129	122

Have you got a magic square?

#### Look at the Bill

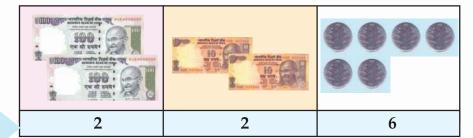
Tommy and Mary went to the shop to buy some grocery and vegetables.



Number 228	Grocer's	s shop
Item	Weight	Amount
Rice	5 kg	150
Sugar	2 kg	56
Soap	2 kg	20
	Total	•••••

Number 136 Veg	getable	shop
Item	Weight	Amount
Onion	1 kg	25
Lady's finger	1 kg	25
Carrot	1 kg	36
Banana	1 kg	50
	Total	••••••

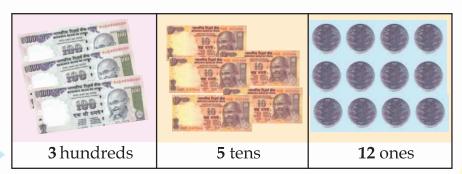
What is the amount in each bill? What is the total amount?



Bill from the grocery shop



Bill from the vegetable shop



Total

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

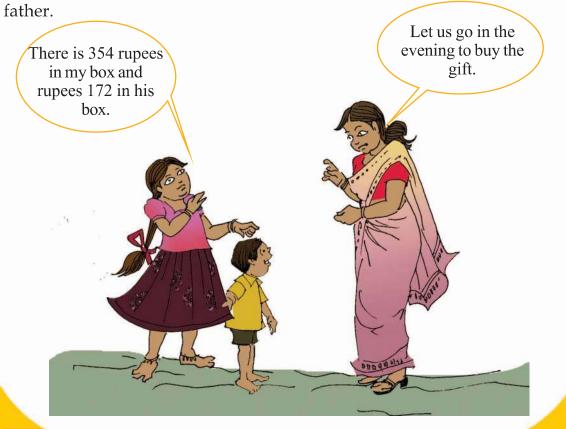
3 hundreds	1 5 tens	1) 2 ones
3 hundreds	<b>6</b> tens	2 ones

We can write this as

hundreds	tens	ones	
2	2	6	4
1	3	6	
3	6	1 2	

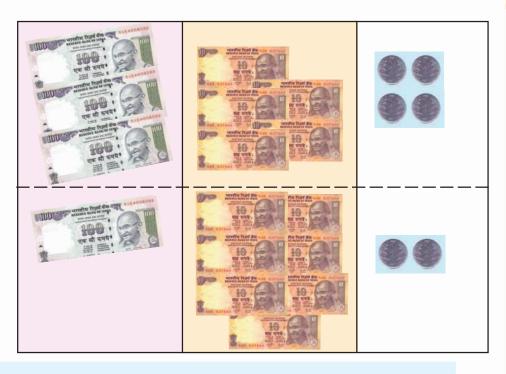
# Birthday Gift

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



# What is the total amount of their savings?

12 tens means 10 tens and 2 tens.



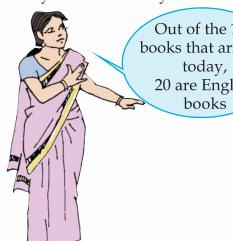
3 hundreds	5 tens	4 ones	+
1 hundred	7 tens	2 ones	
1 4 hundreds	1) 2 tens	<b>6</b> ones	

We can write this as

hundres	tens	ones	
1	5	4	+
1	7	2	
5	12	6	

# Library

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



Out of the 120 books that arrived 20 are English

> 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?

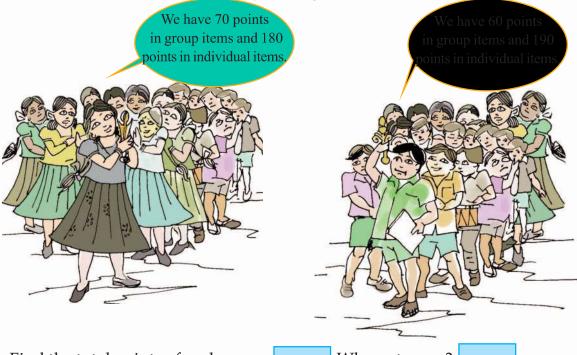


4	+	
	M	
/////		

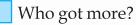
I understood how to find the total	
Without knowing the number in the UP section, [I can find the total	
I am sure that the method I used is correct	
I can say the method and operation by which I reached the answer	

# Victory celebration

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



Find the total points of each group



# Circus

Everyone was eager to see the circus.

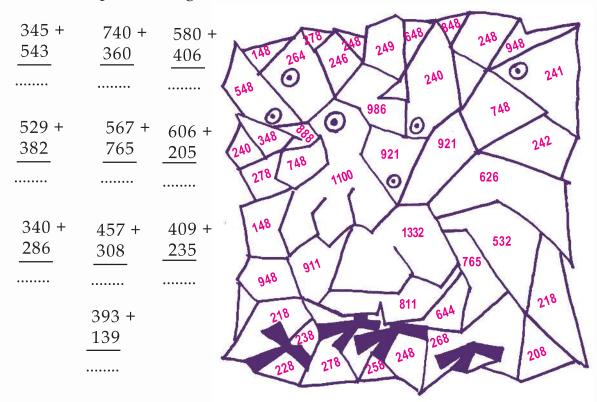
Today tickets were given to 765 gents, 348 ladies and 92 kids.



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.



# 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
Shirt325 rupees
Churidar 350 rupees
Skirt 265 rupees
Top 215 rupees
Umbrella 175 rupees
Bag 285 rupees
Saree 375 rupees

Note: Gift coupons for those who buy things for over 500 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

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.

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.

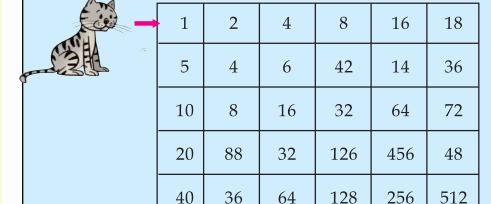
What is the peculiarity of the sum of two odd numbers?

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.



100

128

500

1000

80



• 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.

#### **Numbers and Numbers**

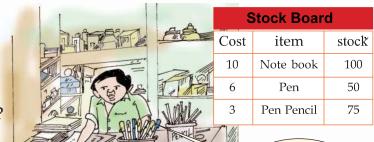


#### To the store

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?
- What is the balance stock after today's sale?

• How did you find it?



Today's sale is 25 note books, 15 pens and 20 pencils.

#### How I found out



Note book	
Pen	
Pencil	

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



We need 25 note books, 24 pens and 29 pencils for our class.

- Ammu bought these items from the store.
   Find the balance of each item in the store.
- How did you find it?

#### How I found out



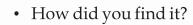
# Science Magazine

I paid rupees 156 from rupees 175 given to me by my father.



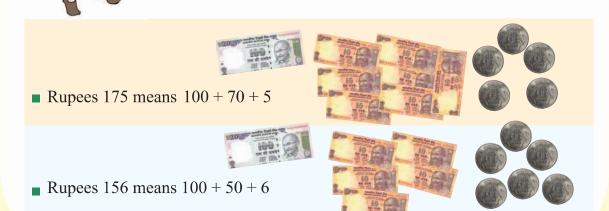


What is the balance with Ammu?





It's not possible to take away 6 rupees from 5.



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

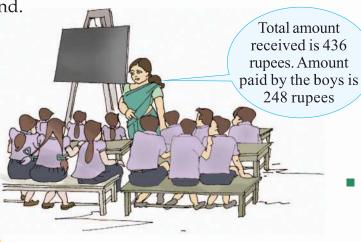
#### We can write this as

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.



What is the amount paid by the girls?

- How did you find it?
  - Subtract 248 from 436.
- What is the way?

We can't take away 8 rupees from 6 rupees and 4 ten rupees from 3 ten rupees.









436

3 ten rupees in
436 rupees.
We can add 1 ten
rupee with
6 rupees

$$200 + 40 + 8$$



Next 4 tens from 2 tens.
There are 4 hundred rupees. Change one hundred into tens

Then we can write it this way



#### That is,

$$100 + 80 + 8$$

We can shorten these steps like this.

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

Hundreds	Tens	Ones	
3 4	2	16	
2	4	8	

Hundreds	Tens	Ones
3	12	16
2	4	8
1	8	8

3 4	12 2 3	16 6	_
2	4	8	
1	- R	8	

$$\begin{array}{r}
436 - \\
248 \\
\hline
188
\end{array}$$

In short, we can write







• 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?



• Ammu bought a story book from the store.

I had rupees 750. Now I have only rupees 505



What should be added to 505 to make 750?



Instead of 505 what if it is 500 ?



- What is the cost of Ammu's story book?
  - Ammu gave 250 rupees to her mother. She bought a hand bag.
- What remains with Ammu?



There was 952 rupees in the account. Now it is only 227.

What amount did Ammu's mother withdraw from the Bank?

#### In the rice shop

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



25 kg rice costs rupees 900. I have only rupees 763 with me.

Ammu's brother gave him the balance amount.

What amount did her brother give?





#### Cricket

Ammu is watching cricket.



How many runs more does India need to reach Sri Lanka's score?

If we subtract 16 tens from 25 tens, what will we get?



How did you find if?

#### How I found out







In a one day cricket match, India scored 243 runs. The opposite team could score only 193 runs. How many more runs did India score?

#### To the school

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

From 782 packets, 373 packets were given to the UP classes.





What is difference in their ages?

- 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.

391 kg. of rice are needed for 5 days. After 3 days, 158 kg. of rice was left.

How many kilograms of rice was used in 3 days?

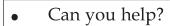


#### Milk distribution

Today we got
536 litres of milk. After
supplying to schools,
286 litres of milk was left.
How many litres of milk
were given to the schools?

What should be added to 286 to get 536?







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?



#### **How I found out**







#### To find, if this is correct, the way I used

#### 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?
- 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?

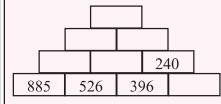
$$1000 - 1 = 999$$

$$186 - 1 = 185$$

$$999 - 185 = 814$$

#### Number Pyramid

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



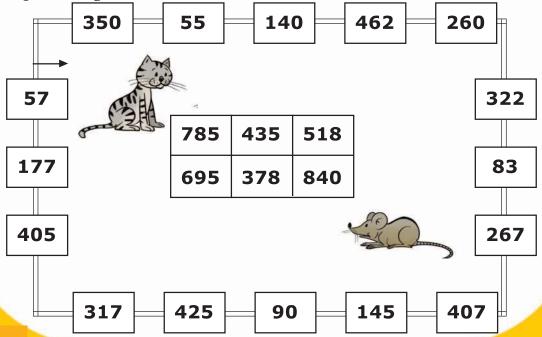


- Among the 240 notebooks with the School Society, half of them were sold. Find the number of notebooks left.
- Ramu bought brinjal for 545 rupees and lady's finger for 232 rupees. He sold the brinjal for 637 rupees and the lady's finger for 365 rupees. Find the profit from each sale. What was the total 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

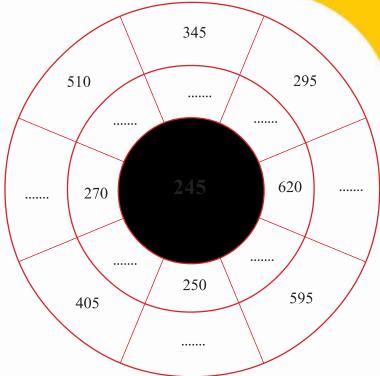
44

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.



#### Write the difference

Write the numbers in the wheel to get the difference as the middle number.



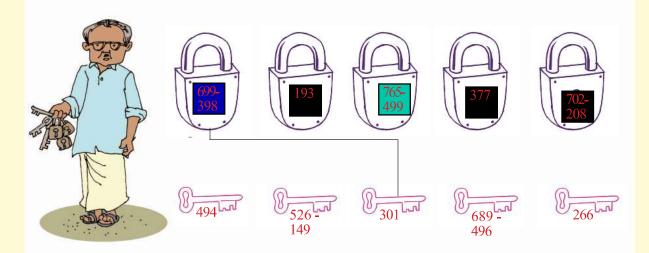
#### LOVE

- 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

### 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.



#### Nine and me

990 - 099 = 891

963 - 369 = 594

936 - 639 = 297

981 - 189 = 792

954 - 459 = 495

927 - 729 = 198

972 - 279 = 693

945 - 549 = 396

918 - 819 = 099

### Find out the peculiarity

994 - 90 = 904

993 - 90 = 903

994 - 180 = 814

993 - 180 = 813

994 - 270 = 724

993 - 270 = 723

994 - 360 = 634

993 - 360 = 633

994 - 450 = 544

993 - 450 = 543

994 - 540 = 454

993 - 540 = 453

994 - 630 = 364

993 - 630 = 363

994 - 720 = 274

993 - 720 = 273

994 - 810 = 184

993 - 810 = 183

Prepare a similar one like the above.





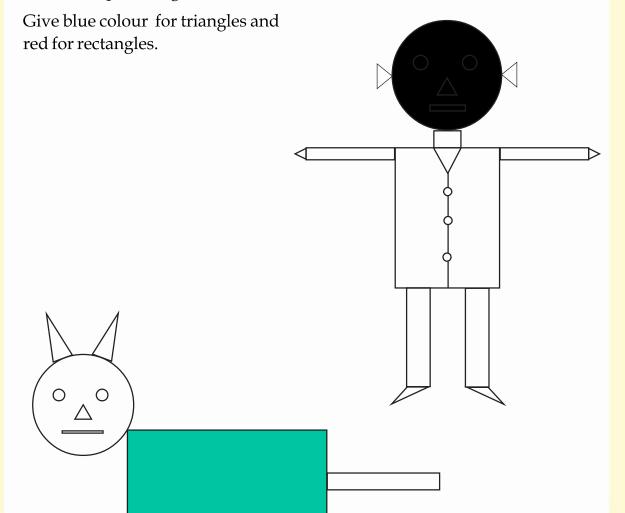
Look at the picture.
Can you say what are the geometric shapes in the picutre?
Which of them are rectangular in shape?
Circular shape?
Triangular shape?

### Let's give colour

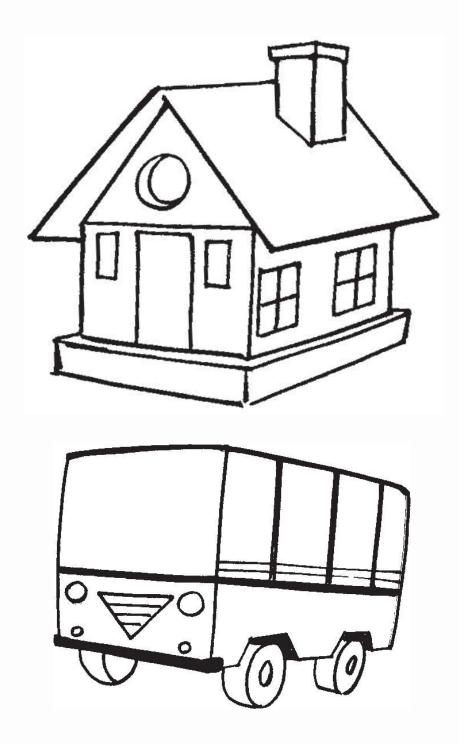
Look at Appu colouring.



Colour the pictures given below.

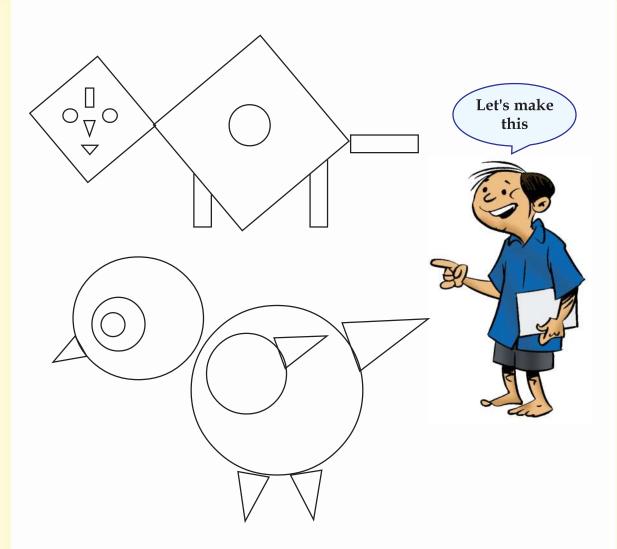


Give different colours to the pictures and make them beautiful.



### 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.



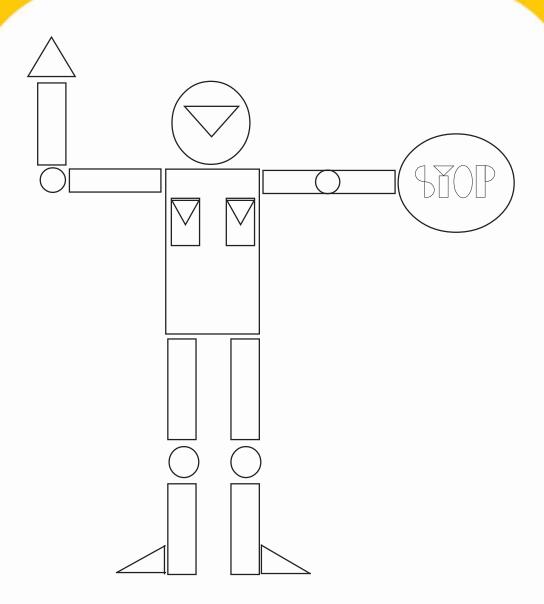


#### We can draw Mathematical Shapes

Software for the purpose: Tux Paint in IT@School GNU/Linux.

How to open the software,

Applications → Education → Tux Paint

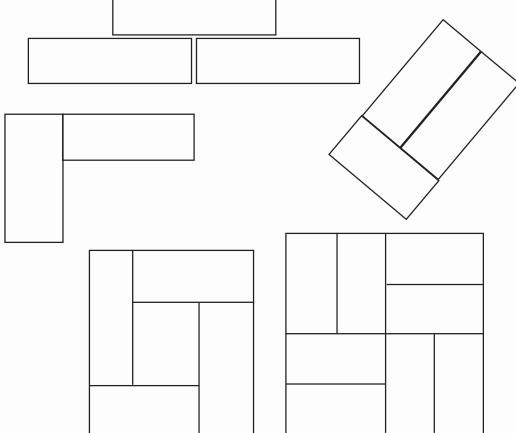


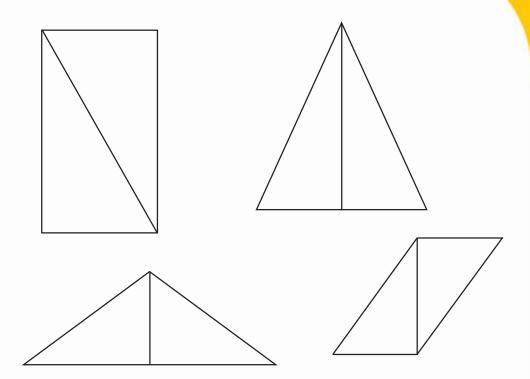
• Count and write the number of rectangles, triangles and circles in the above picture.

## Triangle and Rectangle



Look at the pictures made by Anu and her friends using triangles and rectangles.





Let us also draw like this.

We need rectangles and triangles.

We can take these shapes from the Mathematics Lab.

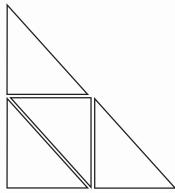
We can use them to draw different shapes.

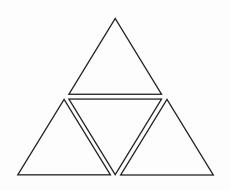
Give colours you like and exhibit them.

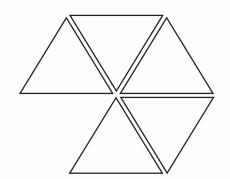


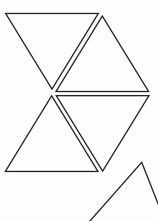
Look at the shapes made by Vinu and his friends.

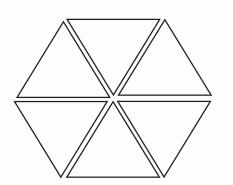
We can make and draw many shapes by joining triangles and rectangles. Colour these pictures and make it beautiful.

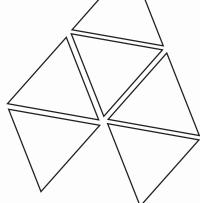


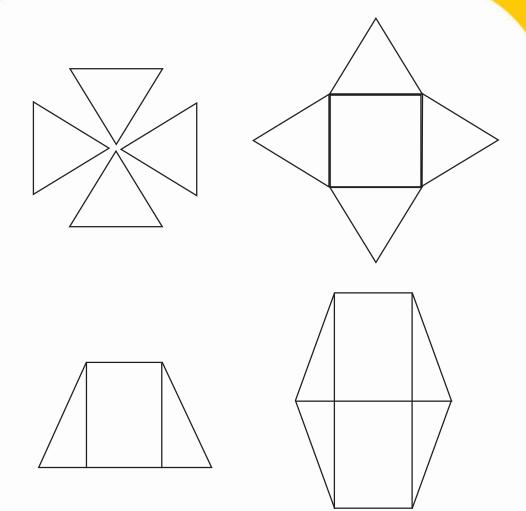








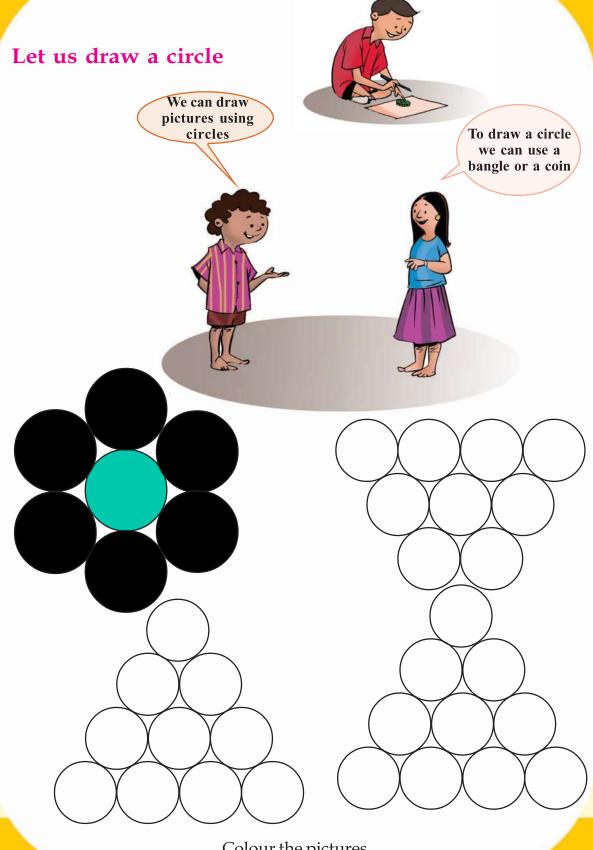




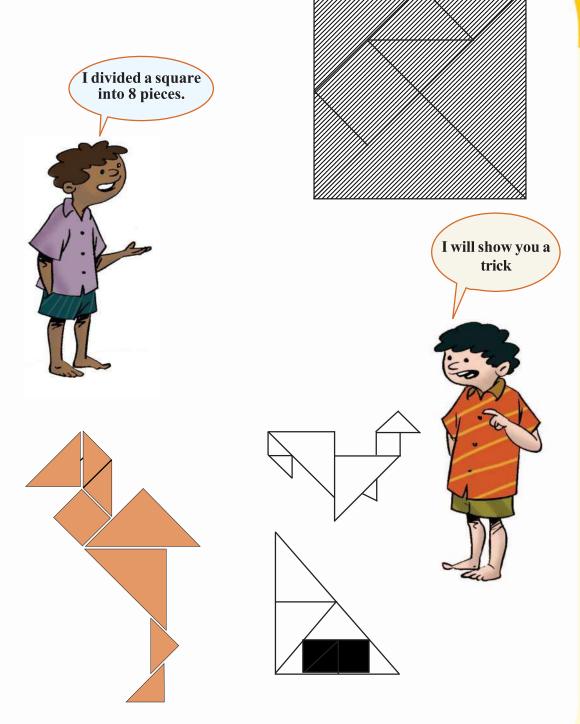


# When I put together or drew

Corners are joined.	
Edges of the figures are drawn straight.	
There was a pattern in joining the shapes.	
The pictures drawn are beautiful.	



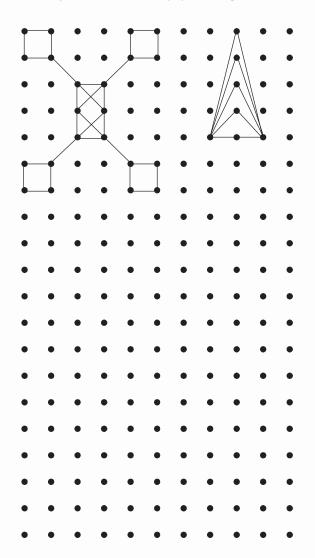
### Figures of different shapes



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.



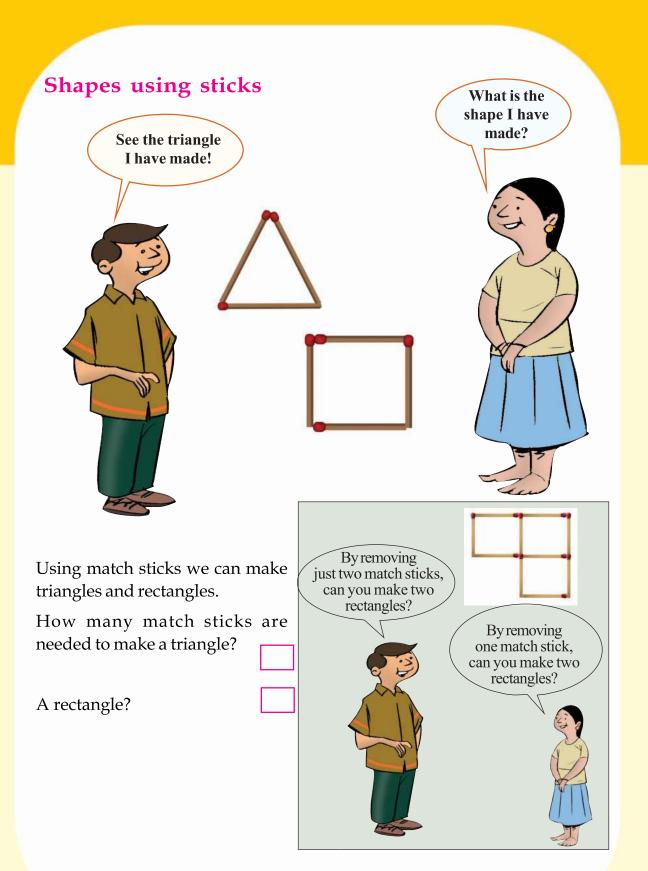


#### **Constructions using Mathematical Shapes**

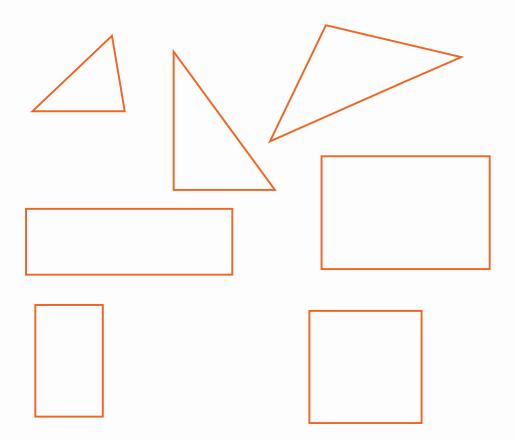
Software for the purpose: GCompris in IT@School GNU/Linux.

How to open the software

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



Using sticks, make triangles and rectangles as given below.



Paste the sticks neatly on a chart paper to make shapes.

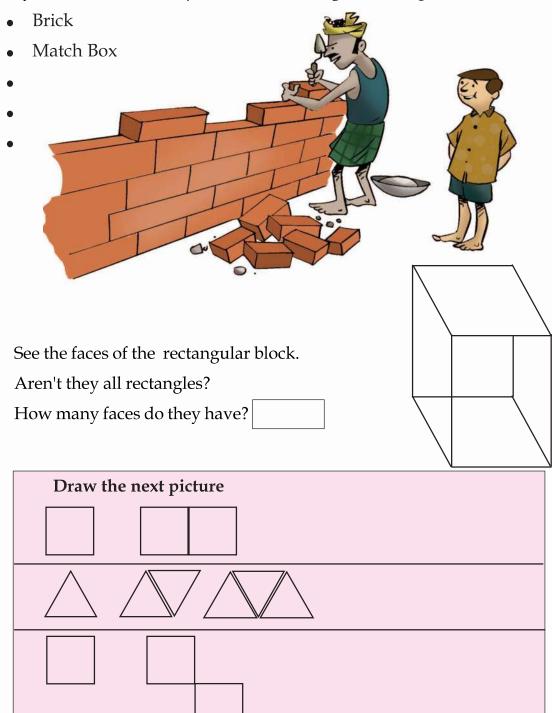
A triangle has 3 sides.

How many sides does a rectangle have?



### **Rectangular Blocks**

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



### Cap and Boat



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.



Every one in my bench got two sweets each.

We are five in number.

What is the total number of sweets for us?

$$2 + 2 + 2 + 2 + 2 = 10$$

5 two's make 10.

Shorten this as  $5 \times 2 = 10$ .

If one more friend joins the group, then how many sweets are needed?

We can shorten this as

..... × ..... = .....

### **Toy Cart**

In the class, students are making toy carts.

Raju also made carts.

Three wheels for a cart.

Bottle tops were used as wheels.

Raju wants 4 carts.

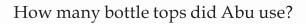
How many bottle tops does he need?

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

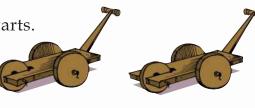
Four 3's make 12

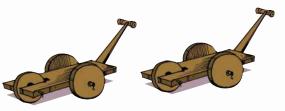
That is,  $4 \times 3 = 12$ .

Abu made two carts.

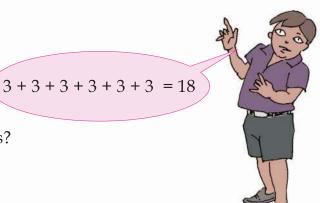


How many tops did both of them use?









## 313131

How can we shorten this?

.....×..... = ......

### 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.



How many flowers are there in one row?

How many rows?

What is the total number of flowers?



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

.....×6 = .....

### Complete the pattern

- 2, 4, 6, ......
- 3, 6, 9, ......
- 4, 8, 12, ......
- 5, 10, 15, ......
- 6, 12, 18, ......

### Addition and Multiplication

Complete the table

	Three 4's make 12	$3 \times 4 = 12$
		$4 \times 3 = 12$
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 ?	3×4	=
Cost of a pen is 6 rupees. Find the cost of 6 pens.		=

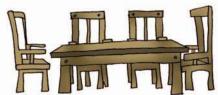


### **Try These**

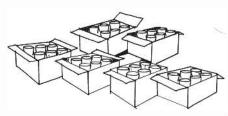
• Ramu planted plaintain trees. Three trees in one row. What is the total number of trees in 6 rows?



• We can arrange 4 chairs around a table. How many chairs are needed to arrange around 4 tables?

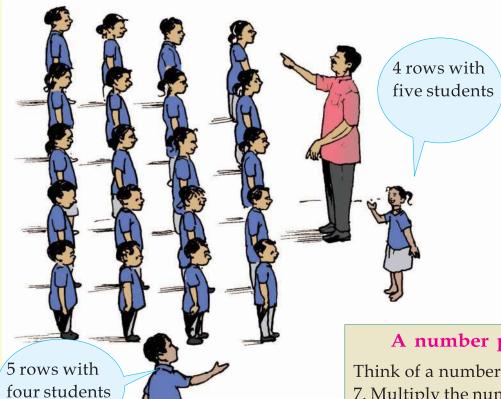


Glasses were purchased to distribute milk for the students. 5
boxes were purchased with 6
glasses each. Find the total number of glasses bought.



### 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

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

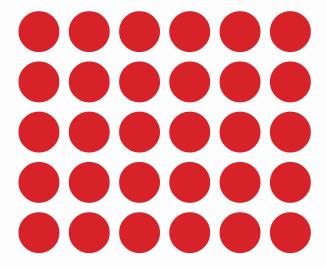
That is, 
$$4 \times 5 = 5 \times 4$$

### 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?



How many dots in one row?



What is the total number of dots?

$$6 + 6 + 6 + 6 + 6 = \dots$$

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

$$5 \times 4 = 4 \times 5$$

$$3 \times 2 = 2 \times 3$$

$$4 \times 3 = \dots \times \dots$$



Added or Multiplied

When three different num-

bers are added or multiplied, the answers are the

same. Find the numbers.

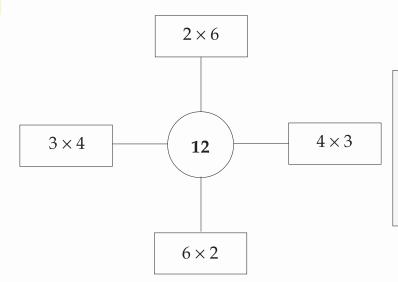
Let's Multiply

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

GCompris → Mathematics → Go to calculation activities → Go to Algebra activities → 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?

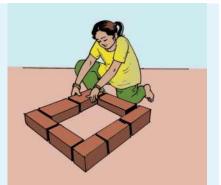


#### **Factor Number Munchers**

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

GCompris → Mathematics → Go to calculation activities → Go to Number Munchers → Factor Number Munchers

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,

 $GCompris \rightarrow Mathematics \rightarrow Go to calculation activities$ 

→ Go to Mathematics memory activities → Multiplication memory game

### Complete the table

From the previous table, write the groups of 3.

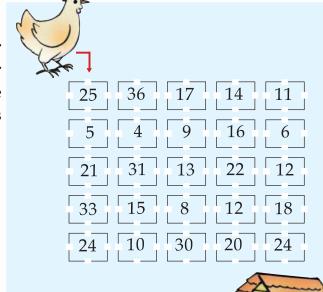
$$1 \times 3 = 3$$
  
 $2 \times 3 = 6$   
 $3 \times 3 = \dots$   
..... = ......  
 $6 \times 3 = \dots$ 

We can write the groups of 4 and 6 as

### **Way Home**

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

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

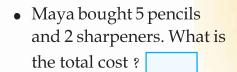


#### **School Store**

Look at the Price List displayed in the school store.

Item

 Manu bought 4 notebooks and 4 pens. What is the total cost?



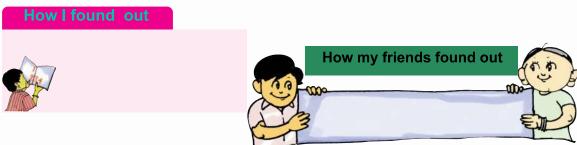
• Rahim bought 3 pencils and 2 erasers. What is the total cost?

 Dennis bought 2 notebooks and 3 rulers.
 What is the total cost?



• 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.



Price

Pen .....6 rupees

Pencil ...... 5 rupees

Sharpener..4 rupees

Eraser...... 3 rupees
Notebook 10 rupees

Ruler ......2 rupees

#### 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.

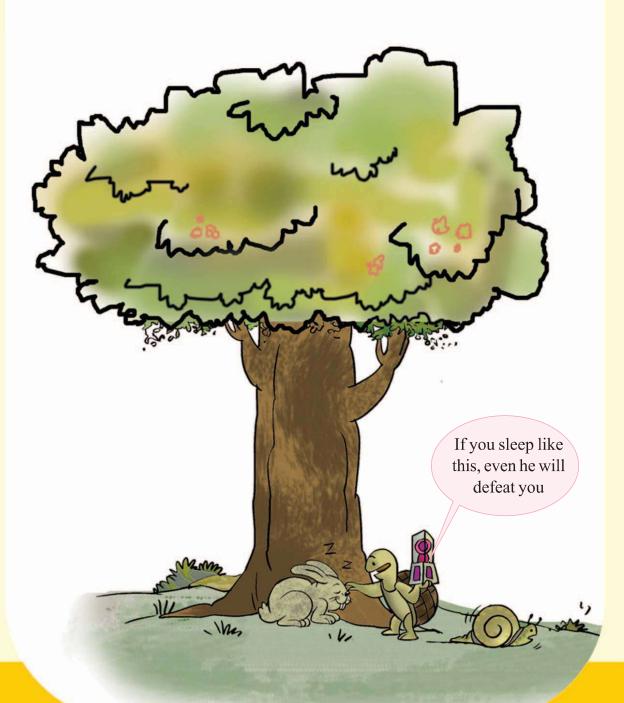
Eighth standard has 37 students less than the seven standard. There are 105 boys in the 8th standard.

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.





## Aji's one day

He wakes up in the morning

6 O'clock

11 12 1° 10 1 2° 3° 3° 4°

Takes bath

7 O'clock

11 12 1° •9 3• •8 7 6 5 4•

Goes to school

9 O'clock



Class begins

10 O'clock



Takes lunch

1 O'clock



School time ends

4 O'clock



Studies at home

Night 7 O'clock



Sleeps

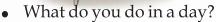
Night 9 O'clock



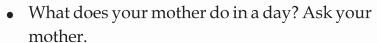








- Wake up in the morning
- Take bath
- Study
- Read news paper
- Take breakfast
- Go to school
- Participate in the school assembly
- Participate in the learning activities
- Take lunch
- Sing National Anthem
- Play in the evening
- Study at night
- Write diary
- Sleep



- \_
- \_





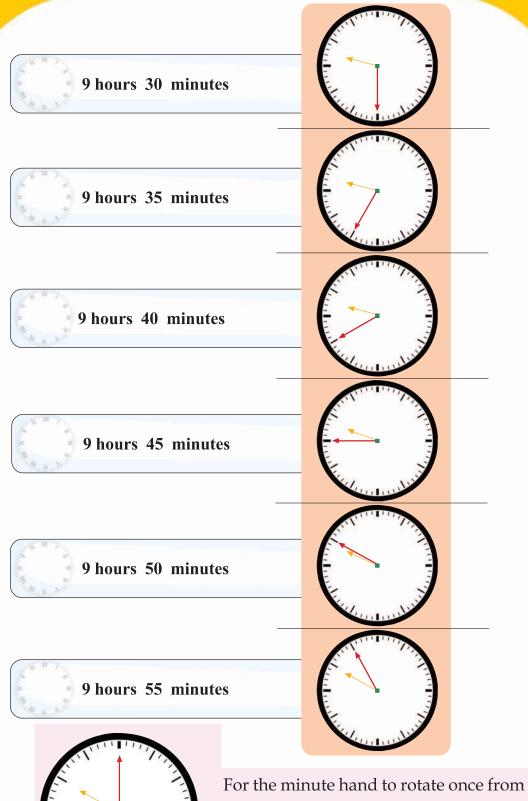




#### **Time**

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.

Look at the time and the position of the two hands  $\,$ of the clock. 9 O'clock 9 hours 5 minutes 9 hours 10 minutes 9 hours 15 minutes 9 hours 20 minutes 9 hours 25 minutes



12 to 12, 60 minutes is needed.

That is 1 hour is equal to 60 minutes.

## My day

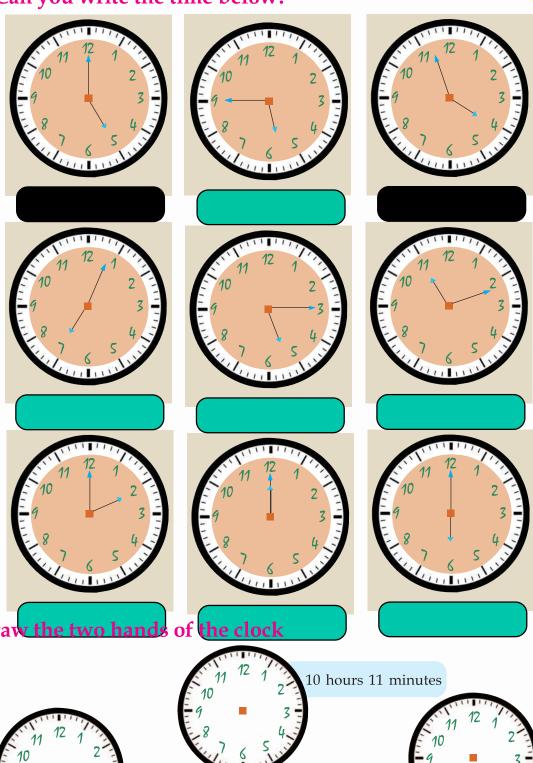


I wake up at 7 O'clock and complete my routine work before and drink tea. After I start for school. After 2 periods there is a small interval. Lunch break is between and . The school ends at and I reach home before . At I read my lessons and sleep at





## Can you write the time below?

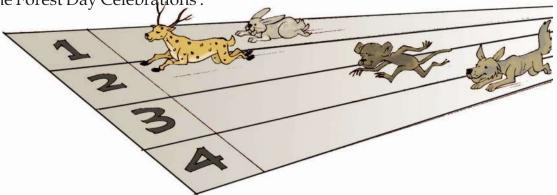


2 hours 47 minutes

6 hours 20 minutes

## 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.

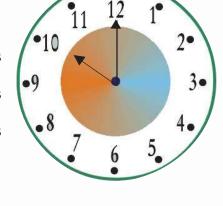
Chinnu deer - 10 hours 1 minute

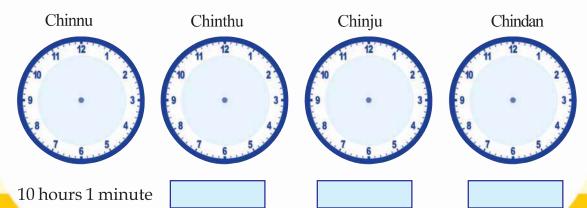
Chinthu rabbit - 10 hours 2 minutes

Chinju fox - 10 hours 3 minutes

Chindan monkey - 10 hours 4 minutes

We can show these times in clocks.





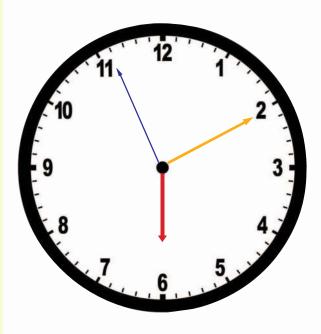
#### **One Second**

To blink the eye.....
To count from 1 to 3 ....
For a chalk piece to fall down from the table.
What is the time taken?



Second is used to represent time that is less than a minute.









#### Let's set the time

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

GCompris → Go to discovery activities → Miscellaneous activities → Learning clock

### How many hours?

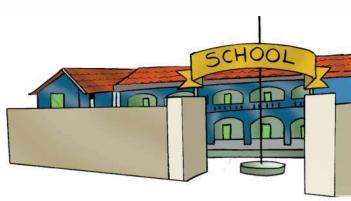
- From 6 O'clock in the morning to 6 O'clock in the evening.
- From 10 O'clock in the morning to 4 O'clock in the evening.
- From 6 O'clock in the morning to 1 O'clock in the afternoon. hours
- From 12 noon to 12 midnight. hours
- 7 O'clock in the morning to 7 O'clock the next morning. hours



### My distance and time

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





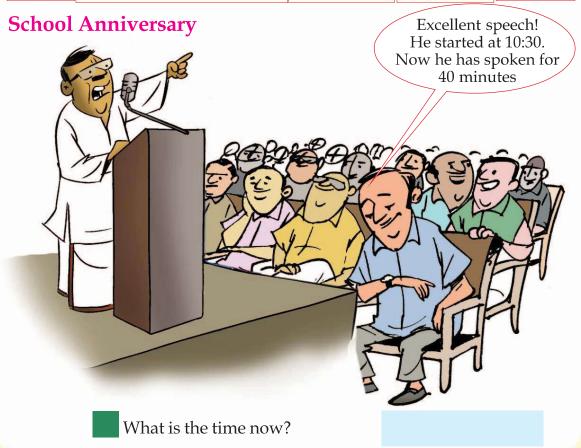
Isn't it better to say that the starting time is 9:30?

When did Aji reach the school?



• 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				





When will the train reach the station?

### Car journey

1 drove the car for 2 hours and 30 minutes. You took 1 hour and 45 minutes.



Find the total time taken by them?

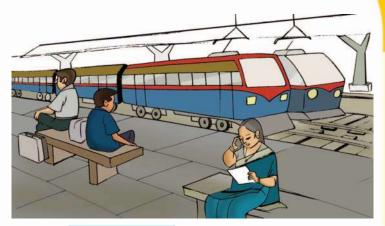
#### How I found out





### 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.

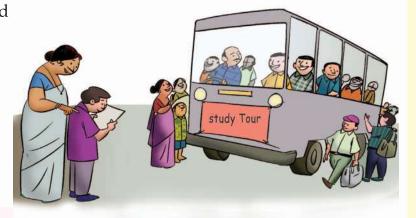
- Find the time taken by each train to travel from Thiruvananthapuram to Ernakulam?
- What is the difference in time?

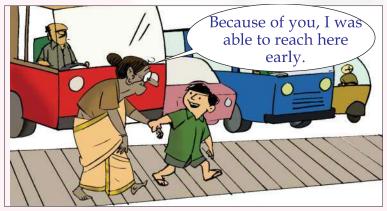
### **Study Tour**

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.

- 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

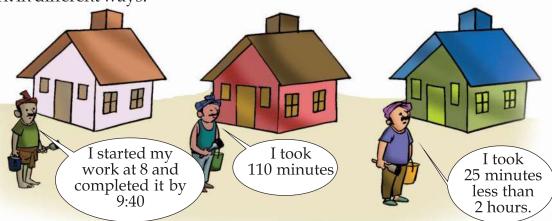
Arrival time	Departure time	Time spent
Dam 8:30	9:30	1 hour
Zoo 10:00		

- 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?

#### How I found out







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**

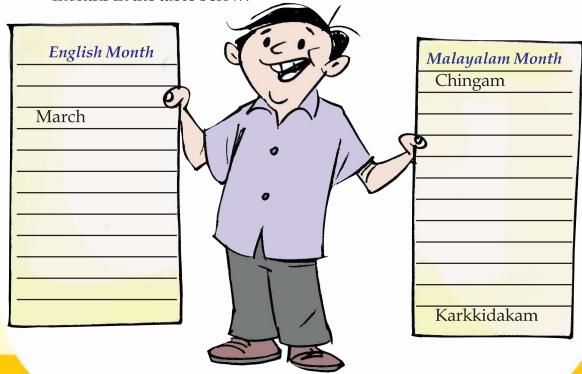
Write the names of the month in which we celebrate the following



	Celebration	English month
•		
•		
•		
•		
•		
•		
•		
•		
•		
•		
•		
•		
•		



- 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.			