Standard IV

MATHEMATICS

Part - 1

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.

Dear children,
     We have learnt many basic ideas
     Of Mathematics
     There is much more to learn
     Laughing and playing
     Drawing and do calculating
     And solving problems
     Let's learn Math
     Thinking, enquiring
     And finding out
     Let's go ahead...

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Director
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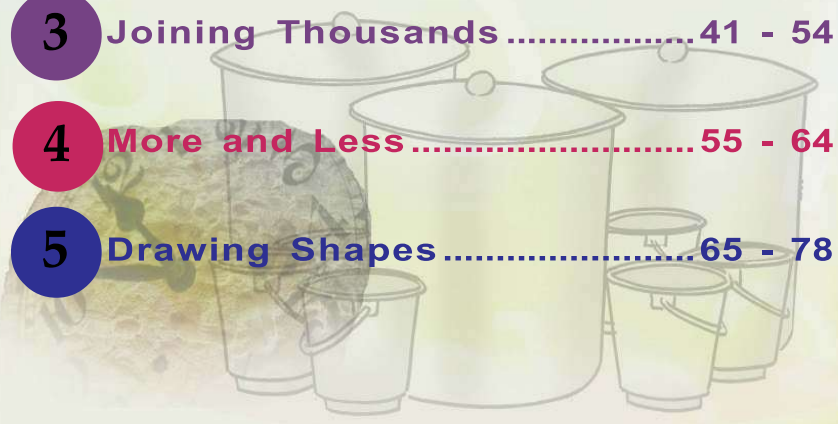**Sujith Kumar G.**
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Contents

Certain icons are used in this textbook for convenience

Additional activity/
Extended activity

How I did it

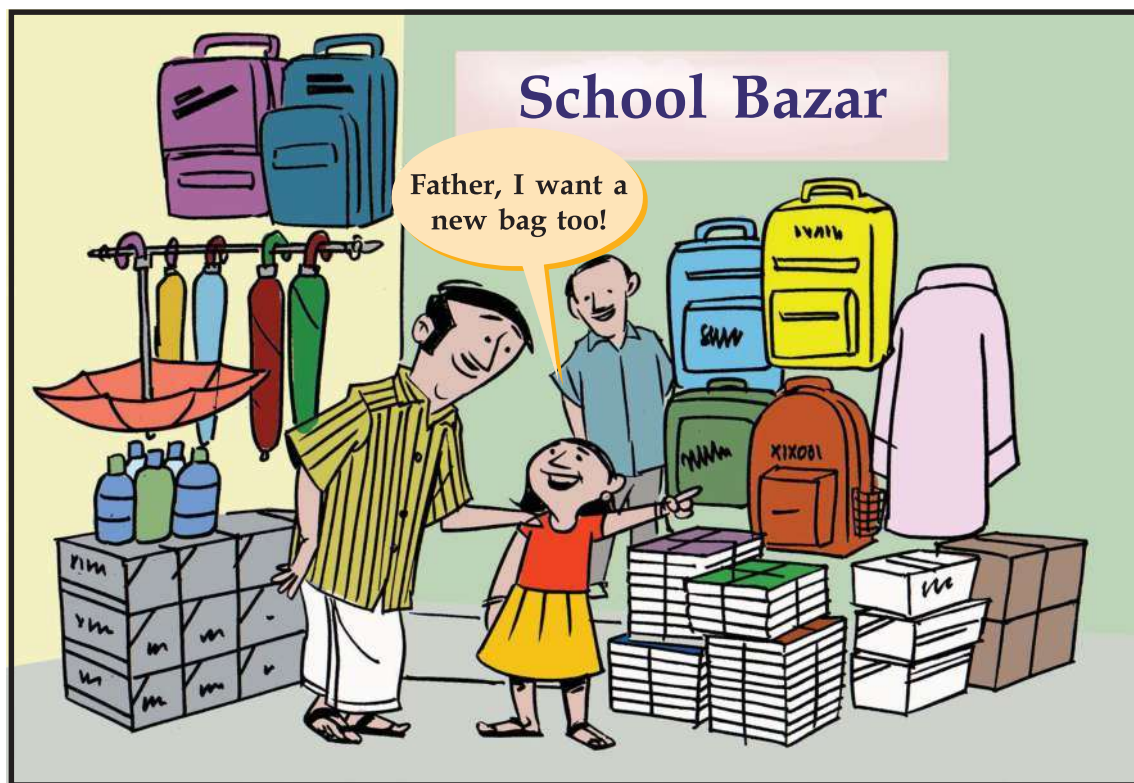How my friends did it

Assessment

ICT activity

Project

Among Four Digit Numbers

1

Back to school

Summer vacation is almost over. Reena and her father are at the school bazar.

- They bought an umbrella for 250 rupees, 5 notebooks at 10 rupees each and a dress for 700 rupees.

? What is the total cost? ☐

? Father has only 100 rupee notes with him. How many notes should he give? ☐

? Suppose father had only 500 rupee notes with him. How many notes then? ☐

? What if he had only 1000 rupee notes?

He also bought Reena a bag for 500 rupees.

? Then how much should he pay in all?

☐

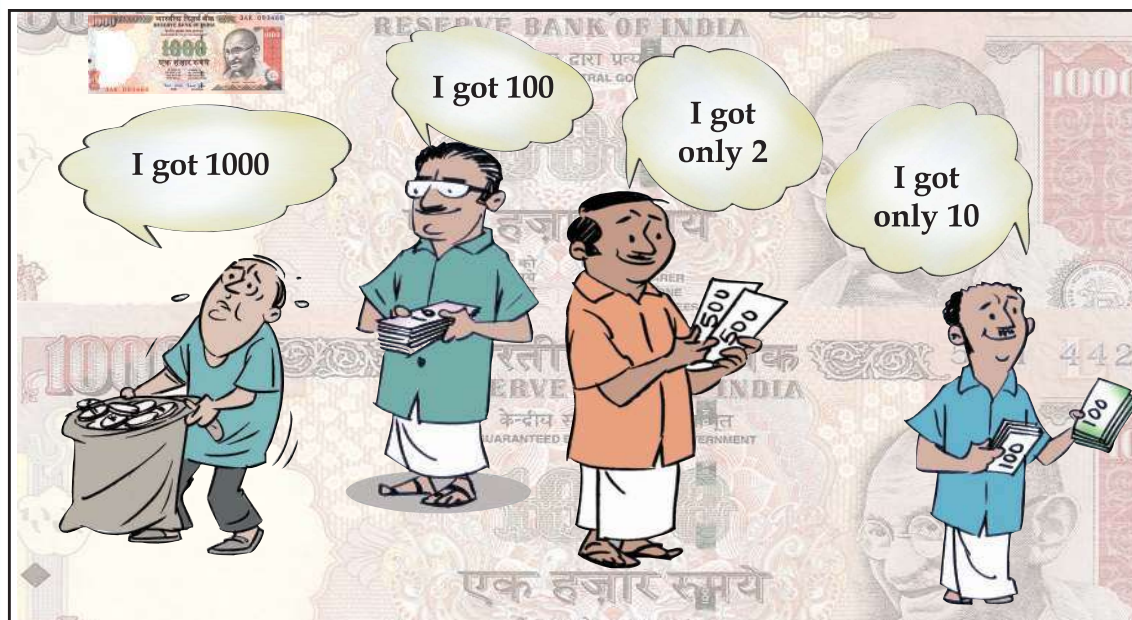? He paid it in 1000 rupee notes and 100 rupee notes. How many of each did he give?

Number of 1000 rupee notes ☐

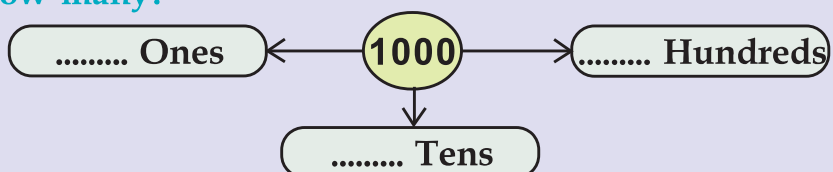Number of 100 rupee notes ☐

> I have 50, 100, 500 and 1000 rupee notes. How many of each make 1500 rupees?

Changing a note

I got 1000

I got 100

I got only 2

I got only 10

How many?

.... Ones ← **1000** → .... Hundreds

.... Tens

How many seeds?

Palakkunnu UP School

Notice Board

*On June 5th,
Environmental day,
Haritha club
distributes vegetable
seeds to members.*

■ 10 packets of seeds were brought in, each containing 100 seeds.

? How many seeds in all?

These seeds are to be equally distributed among the 100 members of the club in small packets.

? How many seeds in each small packet?

How I did it

How my friends did it

Let's help our friend

■ A friend in hospital. Each class decided to raise 1000 rupees. Details are given in the table. Fill in the amounts to be raised in the fourth day.

Class	First day	Second day	Third day	Total	Amount needed on the fourth day
IV A	310	490	100		
IV B	400	490	100		
IV C	410	290	250		
IV D	410	490	99		

Thousand and thousand

Thousand completed!

Let's give it to the Headmaster

The four class leaders gave the money to the Headmaster.

Let's find out the total amount.

? How much did IV A and IV B give?

? Together with the amount from IVC, this becomes

? Together with the amount from IV D?

? What is the total amount from the four classes?

$$1000 + 1000 + 1000 + 1000 = 4000$$
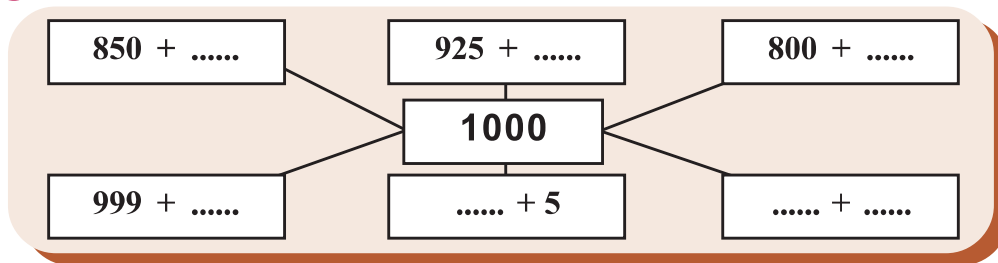
4 thousands make 4000

10 thousands make

Fill in the numbers

1000, 2000, ..., ..., 5000

9000, 8000, ..., ..., 5000

To get thousand

850 + ...	925 + ...	800 + ...
	1000	
999 + ...	...... + 5	...... + ...

Next, write thousand as the sum of three numbers in different ways.

1000	=	850	+	100	+	50
1000	=	925	+	50	+	
1000	=	800	+		+	
1000	=		+		+	

Children's savings

■ Do you have any savings?

Reena and her friends deposit some money in a bank every month. See Reena's deposits from last September to March.

Can you fill in the missing figures.

- Total deposit

- In figures

- In words

Month	Deposit	Total
September	50	50
October	100	150
November	100	250
December	200	450
January	100	___
February	___	750
March	100	___

- School started after summer vacation.

Reena deposited 150 rupees in June

- Her savings till now

- In figures

- In words

When hundreds are joined

■ Manoj deposited 100 rupees every month, for six months from January. Complete the table of deposits.

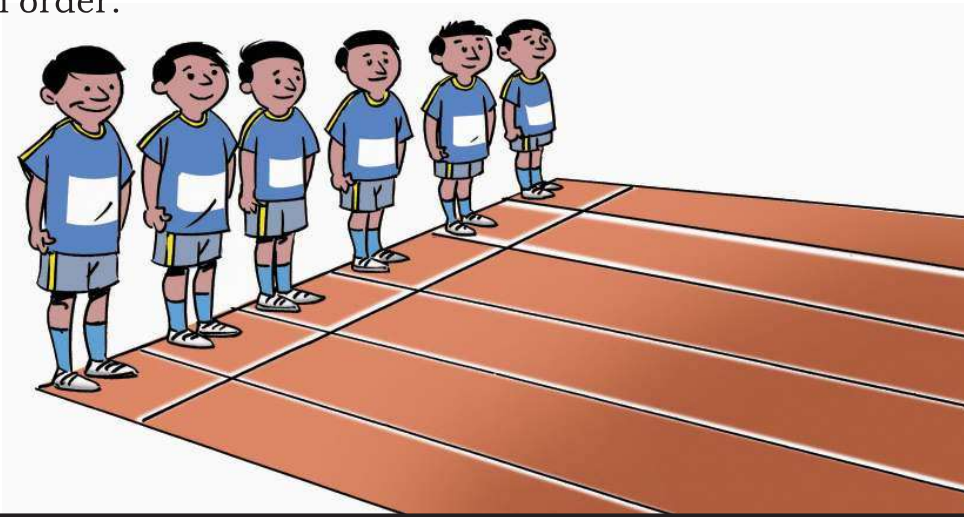**?** What is the total deposit up to June?

In figures ⬚

In words ⬚

Month	Deposit	Total
Balance		1000
January	100	1100
February		
March		
April		
May		
June		

? If 100 rupees is deposited every month upto December, then what is the total amount?

⬚

A Race

■ The 6 children for the hundred metre race are given, numbers starting with 1000 without break. Write these in order.

? Five more children have joined the race. They must also be given numbers without breaks.

⬚　⬚　1008　⬚　⬚

A book for birthday

■ Children of Ramapuram LP school donate books to the library on their birthdays. The library has already 1003 books.

❓ In June the library got 3 books from children of class I.

How many books are in the library now? ☐

In June itself, the library got nine more books from other classes.

❓ How many books now? ☐

❓ Give numbers in order to the seven books got in July.

1020

What is wrong?

Anu was asked to add 2 to 1000 and she did it like this.

$$\begin{array}{r} 1000 + \\ 2 \\ \hline 3000 \\ \hline\hline \end{array}$$

Is Anu's answer correct? ☐

Why? ☐ What is the correct answer? ☐

One-digit numbers

Add a one digit number to 2000

| 2000 + 5 = ... | 2000 + ... = ... |

Add any one-digit number you like, to 4000, 5000,...
In the same way, add two-digit numbers and three-digit numbers to these four digit numbers.

2000 + 54 = ...   2000 + 303 = ...

6000 + 10 = ...   6000 + 410 = ...

.... + ... = ... + ... = ...

.... + ... = ... + ... = ...

Digits in Malayalam

൧	1
൨	2
൩	3
൪	4
൫	5
൬	6
൭	7
൮	8
൯	9
൦	0

13

Card game

■ There are red, green, blue and yellow cards in a box. One draws eight cards from it without looking. The cards have different points.

| 1000 | 100 | 10 | 1 |
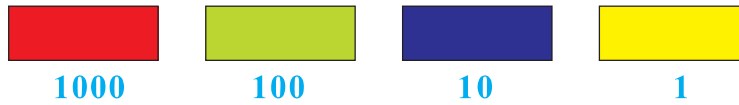
After one round, 6 students got cards like this.

Name	Red	Green	Blue	Yellow	Point
Arun	1	3	2	2	
Mary	1	7	–	–	
Fathima	1	–	–	7	
Jaffer	1	–	2	5	
Usha	2	–	6	–	
Joy	2	–	–	6	

❓ Who got the most points? ☐

❓ Who got the least points? ☐

❓ Write the points from the smallest to the largest.

| Me, about myself	Yes	No
I could find out the points each got		
I could find out the least and the most		
I could explain how I calculated the points		
I know how to add smaller numbers to 1000		

? Rahan got 3 thousands, 2 hundreds and 3 ones. How many points did he get in all? [ ]

? Diya got one green card, one red card and three each of blue and yellow cards. How many points did she get in all?

[ ]

? Bandhura got 2123 points. What are the colours of the cards she got? How many of each? [ ]

> The number made by 50 hundreds is made by how many thousands? What about the number made by 100 hundreds?
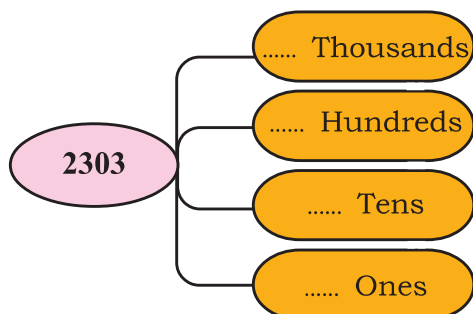
How many cards?

| 1000 | 100 | 10 | 1 |
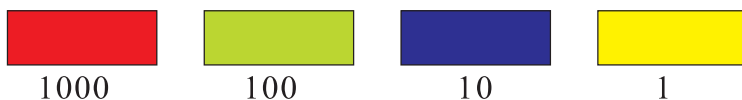
The table shows the points four children got in the card game. How many of each card did each get? Fill in the table.

Name	Point	🟥	🟩	🟦	🟨
Achu	3140	3	1	4	0
Johny	2303				
Rani	3122				
Jaya	2006				

Achu got 3140 points from three thousands, one hundred and 4 tens, right?

? How do we write 2303?

2303

...... Thousands

...... Hundreds

...... Tens

...... Ones
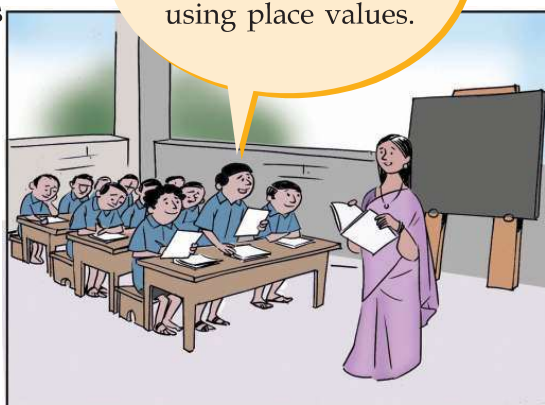
Bicycles

■ Abu, Johny and Balu bought bicycles.

The price of Abu's bicycle is 3250 rupees. He gave three 1000 rupee notes, two 100 rupee notes and five 10 rupee notes

Johny gave three 1000 rupee notes, Four 100 rupee notes and five 10 rupee notes. What is the price of his bicycle?
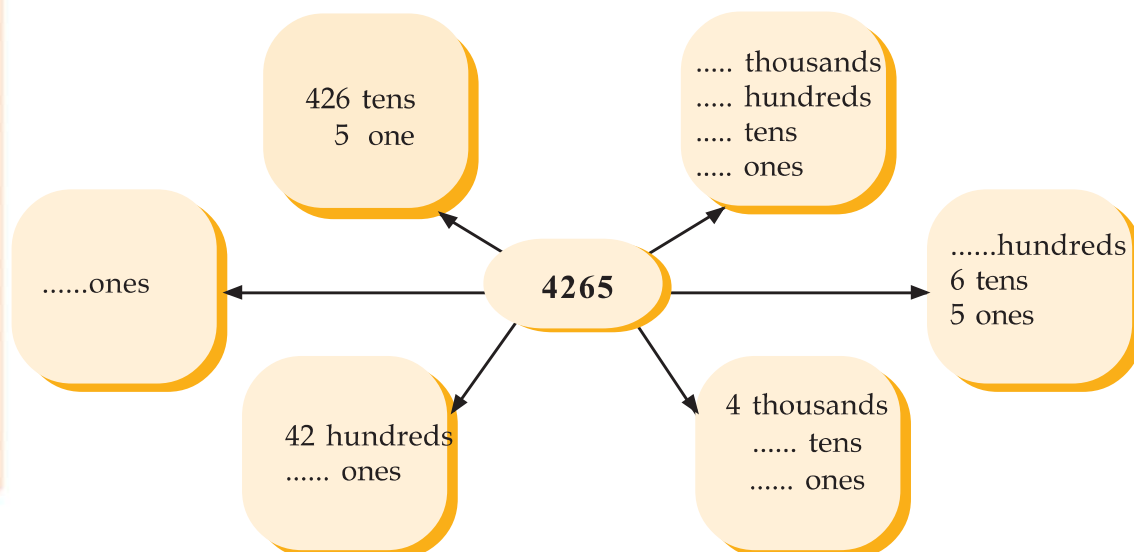
We say that 3250 is 3 thousand 2 hundred 5 ten, using place values.

In figures

In words

Babu bought a seat cover and a bell also. The total price was 4265 rupees. In what all ways can we write this number?

426 tens
5 one

..... thousands
..... hundreds
..... tens
..... ones

......ones

4265

......hundreds
6 tens
5 ones

42 hundreds
...... ones

4 thousands
...... tens
...... ones

In figures and words

4265	Four thousand two hundred sixty five
	three thousand six hundred twenty
	Three thousand thirty
3001	
5022	
6070	
	Seven thousand five hundred
9090	

Complete the Patterns

2100, 2200, 2300, ... , ... , ...

3300, 3200, 3100, ... , ... , ...

5000, 5200, 5400, ... , ... , ...

6500, 6300, 6100, ... , ... , ...

8600, 8700, 8800, ... , ... , ...

Do it in your head

$1 + 10 + 100 + 1000 =$

$2 + 20 + 200 + 2000 =$

$1 + 11 + 111 + 1111 =$

$2 + 22 + 222 + 2222 =$

Fill in the number

1020, 1030, 1040, ..., ..., ...

7070, 7080, 7090, ..., ..., ...

2073, 2083, 2093, ..., ..., ...

3940, 3960, 3980, ..., 4020, ...

4200

4 thousands, ... hundreds

.... tens

.... ones

.... hundreds

3897

3 thousands, ... tens, 7 ones

.... hundreds, 9 Tens, 7 ones

...... tens, 7 ones

3 thousands ...... ones

6875

The Roman way

In Roman Number System, the letters I, V, X, L, C, D, and M are used.

In Roman Number System 1 is denoted by [   ]
5 is denoted by [   ]

How do we write 4 in Roman Number System?

Four is shown by writing one on the left of five – IV

Six is shown by writing one on the right of V

Writing two I's on the right of V makes seven.

What about 8? [   ]

9? [   ]

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

Award and year

■ The list shows the names of writers who got Ezhuthachan award in various years. Write the years in order.

Year	Name
1993	Sooranad Kunjanpillai
	Thakazhi Sivasankara Pillai
	Balamaniamma
	Dr.K.M. George
	Ponkunnam Varkey
	M.P. Appan
	K.P. Narayana Pisharadi
	Pala Narayanan Nair
	O.V. Vijayan
	Kamala Surayya
	T. Padmanabhan
	Sukumar Azhikode
	S.Guptan Nair
	Kovilan
	O.N.V.Kurup
	Akkitham Achuthan Namboodiri
	Sugathakumari
	Dr. M. Leelavati
	M.T. Vasudevan Nair
	Attoor Ravivarma
	Prof. M.K.Sanu
	Vishnu Narayanan Namboodiri

Admission Number

■ In the new school, Meenu and her friends were given consecutive admission numbers. Write the numbers and complete the table

Admission Number	Name
3008	Meenu
	Jasna
	Remya
	Aparna
	Shamna
	Maya

[?] After them, 20 more children joined. What is the admission number of the last one ?

[?] After one month, the last admission number was 3049. How many new students joined?

What should be added to 333 to get 3333?

World cup Football

■ World Cup Football tournament is held every four years. Write in order the years in which the tournament was held.

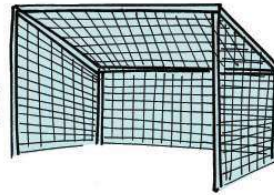| Year	Country
	Argentina
	Spain
	Mexico
1990	Itali
	U.S.A.
	France
	South Korea, Japan
	Germany
	South Africa
	Brazil

I will go to see the world cup in 2025

Fat chance!

❓ The next world cup will be held in which year?

❓ If continues to be held this way, would there be a tournament in 2025?

The digits in a car's number are four consecutive numbers. The sum of the first and last digit is 9. Can you find the number?

Mountains

The names and heights of some mountains are given below. List them from the shortest to the highest.

The world's highest mountain is Everest. Kerala's highest mountain is Anamudi.

Everest
8848 metres

Anamudi
2695 metres

K 2
8611 metres

Kanchenjunga
8586 metres

Nandadevi
7816 metres

Nangaparbat
8126 metres

Place Value

◼ Using the digits 5, 0, how many four-digit numbers can you make?

> 5000, 5005, ..., ..., ..., ..., ..., ...

❓ Arrange these numbers from the smallest to the largest.

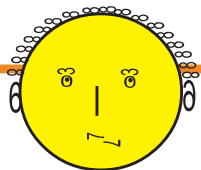> 5000, ..., ..., ..., ..., ..., ..., ...

Among them, the largest number is 5555

❓ In this, the place value of the 5 at the left end is [   ]

❓ What about the 5 at the right end? [   ]

Who am I ?

- Between 1200 and 1300
- 3 in the tens place
- Even number
- One digit is repeated

[   ]

Can you find me?
I am a four digit number.
Me and two times
me together make the
largest
four digit number.
Who am I ?

Odd and Even

First even number	-	2	First odd number	- 1
Second even number	-		Second odd number	
Fourth even number	-		Fourth odd number	
Tenth even number	-	20	Tenth odd number	
50th even number	-		50th odd number	
		100th even number	-	
		400 is the .... th even number.		

Right and wrong

A group of children wrote down some sets of consecutive numbers and the teacher copied these to the blackboard.

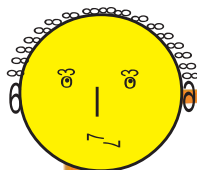Find the right and wrong patterns. Some of these are wrong. Find and correct them.

- 1007, 1008, 1009, 1100, 1101, 1102
- 2006, 2007, 2008, 2009, 2010, 2011
- 3107, 3108, 3109, 4000, 4001, 4002
- 1097, 1098, 1099, 2000, 2001, 2002
- 4447, 4448, 4449, 4050, 4051, 4052
- 6636, 6637, 6638, 6639, 6640, 6641
- 8995, 8996, 8997, 8998, 8999, 9999
- 9095, 9096, 9097, 9098, 9099, 10000
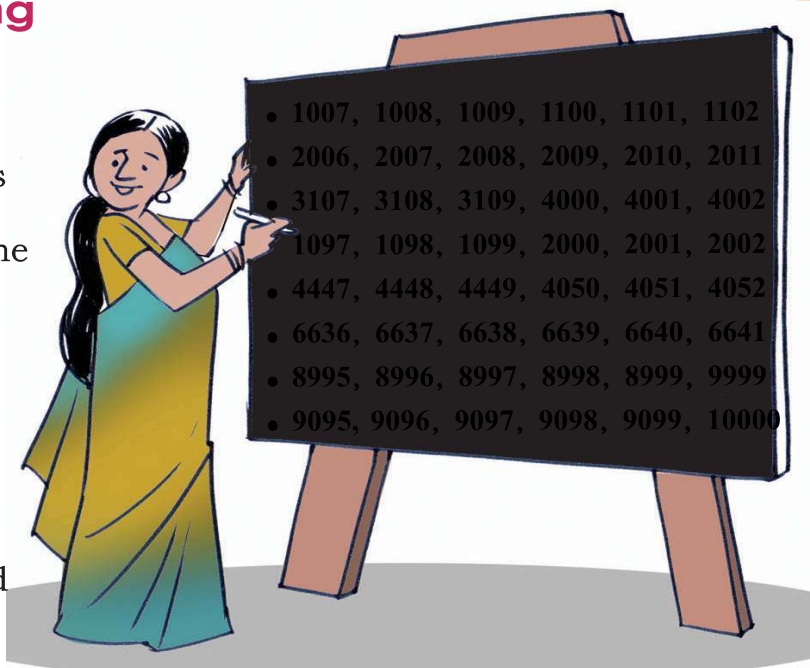
What I found

Right Patterns	Corrected patterns

Who are we?

- Between 2000 and 3000
- Odd number
- Digit in the tens place is 6
- Digits in the ones place and the hundreds place are the same

Sujith's Car Number

- It is a four digit number

- The last digit is twice the first digit

- The second and the third digits are the same

- The number formed by the last two digits is twice the number formed by the first two digits

? Fill in the missing numbers to form three consecutive numbers in each row.

2999,	3000,	3001
2098,	2099,	....
5999,	..........,	6001
..........,	6199,	....
..........,	4200,	....
..........,	7000,	....

Different numbers

Without repeating, how many four digit numbers can be written using the digits 4,6,7,9? Try to write these numbers. What about the digits 3, 7, 0, 5

Small and Large

In each row, draw a circle around the largest number and a square around the smallest number.

4275,	4257,	4725,	4752,	4572
4762,	4726,	4672,	4267,	4276
4662,	4757,	4262,	4755,	4266
4247,	4772,	4727,	4277,	4272
4764,	4677,	4252,	4767,	4257

Write the numbers in circles from smallest to largest.

Do you see any relation among these numbers?

Arrange the numbers in squares from largest the smallest.

Wheel of Time 2

In the Clock

Today's main programmes
7.05 Agriculture news, 8.31
Grameena Bharatham, 12.40
Grama Sree, 1 o' clock classical
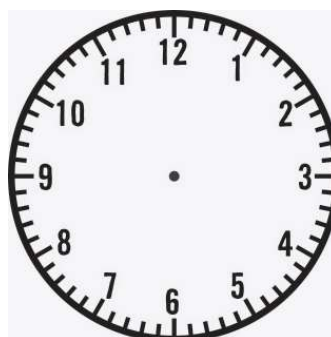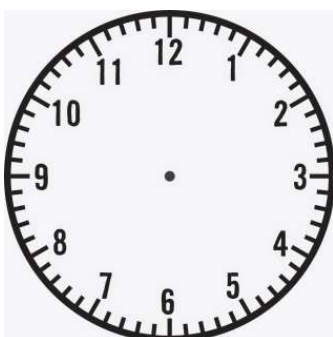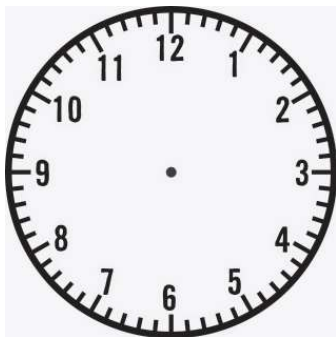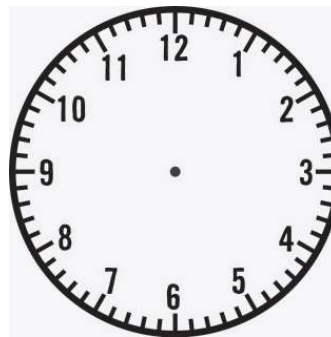music, 6.45 Vayalum Veedum
9.16 Educational Programme

■ Let's mark the times of these programmes in the clock given below.
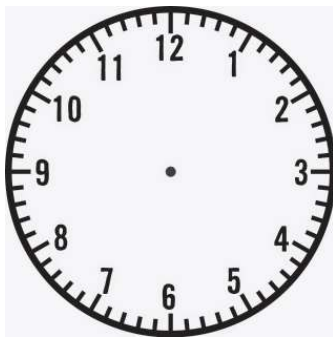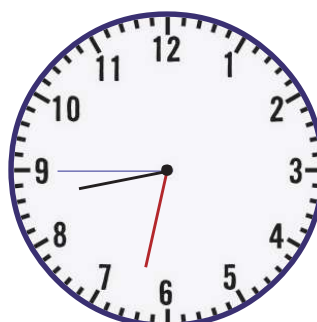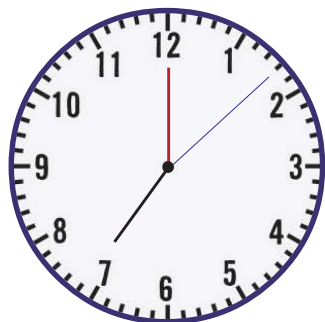
Agricultural News	Grameena Bharatham	

The rocket launched 8 seconds after 7 o'clock from the Satish Dhawan space Centre passed the first stage at 32 minutes and 45 seconds after 8 o'clock.

D D Malayalam

■ Noted this news?.

Asha marked these times in a clock.

The blue hand shows seconds.

We can find seconds by counting the small lines.

Starting at 12, the second hand takes 60 seconds to come back again to 12. It is 1 minute.

- The first clock shows   7 hours 8 seconds
- And the second?

■ How about making a clock ourselves!

❓ What are the things we need?
  • Thick paper
  •
  •

Show the clocks you made in the class.
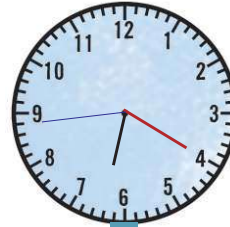
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Write and draw

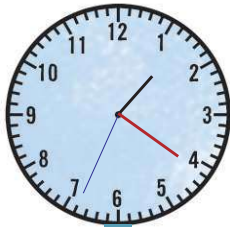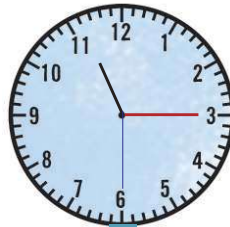■ Write the time each clock shows in the box below.

10 hours
55 minutes
21 seconds

..... hours
.......minutes
......seconds
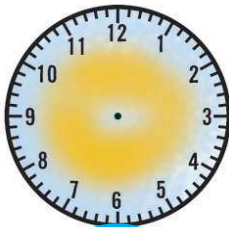
..... hours
.......minutes
......seconds

..... hours
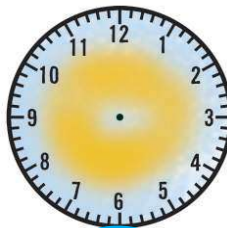.......minutes
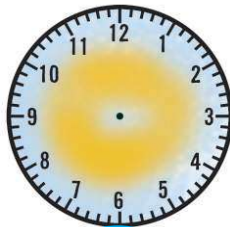......seconds

..... hours
.......minutes
......seconds

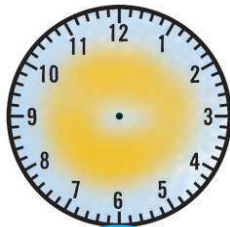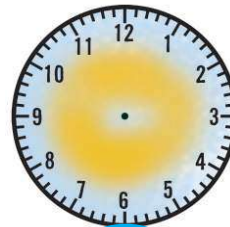■ Draw hands in each clock to show the time below.

4 hours
15 minutes
40 seconds

10 hours
30 seconds

12 hours
35 minutes
17 seconds

9 hours
55 minutes
14 seconds

6 hours
25 minutes
2 seconds

Me about myself	Yes	No
I understand what each hand of a clock shows		
I can say minutes and seconds by looking at the positions of the hands		
I know that a day is made up of 24 hours		
I know that 60 minutes make an hour		
I know that 60 seconds make a minute		

Number race

■ The teacher held a contest of writing the numbers from 1 to 100. The names of the fastest six and their times in seconds are given below. Write these in minutes and seconds.

No	Name	Seconds	Minutes and Seconds
1.	Ajayan	95 seconds	1 minutes 35 seconds
2.	Anna	100 seconds	
3.	Jessy	110 seconds	
4.	Danish		2 minutes 5 seconds
5.	Sulekha		1 minutes 45 seconds
6.	Fasna		2 minutes

Who would be the fastest five in your class in such a race? Find out.

? How much time you would take to write up to 100?

Guess

Now actually try it.

• The teacher will time you.

Real Race

■ The names and times of some of the runners of the women's 800 metre race in the Asian Games 2014 at Incheon are given below.

No	Name	Time taken
1.	Wang Mei	2 minutes 05 seconds
2.	Sushma Devi	2 minutes 01 seconds
3.	Genzeb Shumi	2 minutes 03 seconds
4.	Lemmadi Rajaa	2 minutes 08 seconds
5.	Tintu Lukka	1 minutes 59 seconds
6.	Artigala Aberthana Gayanthika	2 minutes 06 seconds

- Who among these took the least time to finish? What is the time?

- Who took the most? What is the time?

- Write all these times in order from the least to the most.

- Write all these in seconds

Happy Journey

■ Johny is going on a trip with his family.

The report says monsoon will start in 24 hours.

24 hours means one day, right?

The 24 hours from 12 midnight to 12 midnight the next day is taken as one day.

Your attention please! Today's Mangla Express will leave only at 15 hours.

In the 24 hours of a day, the time from 12 midnight to 12 noon is denoted am and the time from 12 noon to 12 midnight is denoted pm.

15 hours means 3 hours added to 12 noon. That is, 3 o' clock, afternoon.

15 hours? But the clock has only 12 hours!

Railways use 24 hours clock.
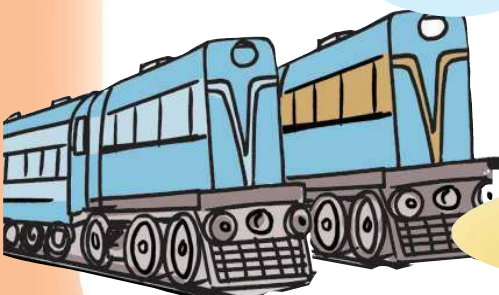
Rewriting

■ The table below shows the times some trains starts from various stations. Write these using am or pm.

Train Number	Name of the train	Starting time	am/pm
16307	Alappuzha - Kannur Express	14:55	
16042	Alappuzha - Chennai Express	16:00	
12977	Ernakulam - Ajmeer Marusagar Express	20:05	8:05 pm
16359	Ernakulam - Patna Express	23:00	
12625	Thiruvananthapuram-Delhi Kerala Express	11:15	
16302	Thiruvananthapuram-Shornur Venadu Express	5:00	

■ The timing of some buses are given below. Write them using 24 hour clock.

Route	Starting time	In 24 hour clock
Thiruvananthapuram - Ernakulam	11:15 am	
Thiruvananthapuram - Kozhikode	6:30 am	
Guruvayur - Kannur	1:40 pm	13:40
Kozhikode - Palakkad	3:45 pm	
Thrissur - Thiruvananthapuram	11:40 pm	
Alappuzha - Kozhikode	8:05 am	

To school

■ Your school time | From....... to........ |

- Write this using am and pm [ ]

- And using 24 hour clock? [ ]

In a clock, how many rotations does the hour hand make in one day?

[?] How many hours is your school time? [ ]

[?] Taking away the two Intervals and the lunch break, how long is your study time? [ ]

Fair-price shop

Working time

8 in the morning till noon.

4 in the afternoon till 8 in the night.

For how many hours does this shop work?

[ ]

Ho I did it

In the Bank

Monday to Friday 10 am - 4 pm

Saturday 10am-2pm

Sunday Holiday

[?] The bank is open for how many hours on a saturday?

[ ]

[?] What about the other days? [ ]

Factory time

■ A factory works in two shifts.

The first shift is from 6 am to 2pm with an interval of 45 minutes

The second shift is from 2 pm to 9:30 pm with an interval of 35 minutes

❓ Total working time of the factory

from .... to ....

❓ In 24 hour clock, this is

from .... to..........

❓ How many hours does the factory work in a day?

❓ How do we write in am/pm form the time the factory does not work?

from .... to ....

❓ How many hours of work in each shift?

❓ Taking away the intervals, how many hours of actual work?

❓ Which shift works longer?

Me, about myslef	Yes	No
I could calculate the working time.		
I could write the working time as in a 24-hour clock.		
I could write the working time using am/pm.		
I could calculate how long a time interval is.		
I could calculate the remaining time when some time is taken away.		

Circus

? Raju, the circus cyclist starts his act at 6:15 am and ends it at 9:30 pm. For how many hours does he ride?

- What are the details given?

- Times are given in the am/pm form

-

How do we find the time of ride?

- First look at the am part.

  - 6:15 am to 7 am - 45 minutes

  - 7am to 12 noon - 5 hours

  - Total time in this part - 5 hours 45 minutes

    - Next the time in the pm part.

  - 12 noon to 9:30 pm

  - 9 hours 30 minutes

We can rewrite this like this:

6:15 am to 9:30 pm is

Time during am ▶ 5 hours 45 minutes
Time during pm ▶ 9 hours 30 minutes
—————————————————
14 hours 75 minutes

75 minutes means 1 hour 15 minutes

14   hours
 1   hour 45 minutes
—————————————————
15   hours 45 minutes

There are other ways.

From 6:15 am to 6:15 pm. Then till 9:30 pm.

If the time is more than 60 minutes, then change it to hours and minutes

? Raju's circus ended their show in one town and travelled to another town. They started at 10:45 pm and reached the new place at 7:30 am. How much time did the journey took?

How I did it

How my friends did it

? A bus which started from Coimbatore at 20:30 reaches Kozhikode at 4:15, the next morning. What is the time taken for the trip?

- How do we find it?
- What are the details given?
- Times are given as in the 24- hour clock.
- How about changing them into am/pm.
- 22:30 means 10 : 30 pm.
  - 10 : 30 pm to 12 midnight - 1 hour 30 minutes
  - 12 midnight to 4:15 am - 4 hours 15 minutes.

It is enough to count by 1 hour from 10 : 30 pm

► 1 hour 30 minutes
► 4 hour 15 minutes
_____

? A Super fast bus starting from Bangaluru at 22:15 reaches Kannur at 6:45, the next morning. How much time does the trip take?

How I did it

How my friends did it

? A sight seeing tour started at 9 one morning and reached a place they wanted to visit at 9, the next morning. How much time did the trip take?

? Due to power shortage use of electricity was controlled for 14 hours from 8 am. At what time does the control end?

Let's complete the table

Calculate time for various trips and fill in the table.

Train No.	Name of the Train	Departure	Arrival	Time of journey
16650	Nagercoil - Mangalore Express	4:20	20:25	
22607	Ernakulam - Bangalore Express	17:00	4:20 Next day	
12623	Chennai - Thiruvananthapuram Mail	19:45	11:45 Next day	
16347	Thiruvananthapuram - Mangalore Express	20:40	10:55 Next day	
12081	Kannur - Trivandrum Janasatabdi Express	4:45		9hours
56650	Kannur - Coimbatore Superfast	5:45		7 hours 40 minutes

? Which train takes the most time for the journery? And the least?

Calendar math

- What are the different kinds of years noted in the calender?

    | Saka varsha | | |

- Write the names of the months in these and the number of days in each.

- How many days are there in a year?

- Where are the dates of different years marked in a Calendar?

- Which day is January 1ˢᵗ, the next year?

Write the dates of other years

English Year	August 15	October 2	November 14
Saka Varsha			
Kolla Varsha			
Hijara Varsha			

- Find the months with 5 Sundays - this year

- The 1st of a month is Wednesday. Which day is the 28th?

- How many months this year has 15th a Sunday? which day is the 1st of these months?

Birth day

? When is your birth day?

? In this year, which day of the week is your birthday?

? In this year, in which date of Kollavarsha is your birth day?

Find the birthday of the other members of your family and write below:

Sl. No.	Member	Date of birth	Day of the week this year	Kollavarsha Month Date
1	Grand father			
2	Grand mother			
3	Father			
4				
5				

- A part of the calender for a month is shown here. What is the date in the square marked with a question mark?

			16	17		
					?	

366 days

February 2012

SUN ഞായർ	MON തിങ്കൾ	TUE ചൊവ്വ	WED ബുധൻ	THU വ്യാഴം	FRI വെള്ളി	SAT ശനി
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

February 2013

SUN ഞായർ	MON തിങ്കൾ	TUE ചൊവ്വ	WED ബുധൻ	THU വ്യാഴം	FRI വെള്ളി	SAT ശനി
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

February 2014

SUN ഞായർ	MON തിങ്കൾ	TUE ചൊവ്വ	WED ബുധൻ	THU വ്യാഴം	FRI വെള്ളി	SAT ശനി
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

February 2015

SUN ഞായർ	MON തിങ്കൾ	TUE ചൊവ്വ	WED ബുധൻ	THU വ്യാഴം	FRI വെള്ളി	SAT ശനി
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

February 2016

SUN ഞായർ	MON തിങ്കൾ	TUE ചൊവ്വ	WED ബുധൻ	THU വ്യാഴം	FRI വെള്ളി	SAT ശനി
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

Mom! Why in 2012 and 2016, February has 29 days?

After every four years, February has 29 days. That year has 366 days.

Any non leap year starts and ends on the same day

The year with 366 days is called a leap year

- You saw the calender for 2016 February. Which is the next leap year? Make the calendar for February that year (February 1st 2020 is Saturday)

38

Time Line

Draw a time line on Mahatma Gandhi, the father of our Nation.

Gandhiji's birth day ....

Passed Matriculation in 1887

Returned India from South Africa in 1915

Arrived at South Africa 1893

Salt satyagraha and Dandi March in 1930

Started Sabarmathi Ashram in 1917

In 1920, Gandhiji visited Kerala for the first time

Chowri - Chowra incident in 1922

Became a lawyer in 1841

India got Independence in 1947, August

Went to England for higher education in 1888

'Do or Die:' Quit India movement in 1942

First Sathyagraha held at Chambaran in 1917

Became a martyr on 1948 January 30

Read the details on Gandhiji? Number each event in the order of the year. Mark them on time line.

- This year, in which month of Kollavarsham is Gandhiji's date of birth? And the date?
- Which year of Gandhiji's birth is this?

Let's find out:

- There are several words in English denoting time, such as dawn, dusk and also expressions like "from dawn to dusk". Collect these and do a project on it.

- A clock fell down from Unnikuttan's hands and broke into three pieces. The sum of the number in each piece is the same. Can you draw it?

- Can you divide a clock into six parts, with the sum of the numbers in all parts the same?

Calender Maths

- What is the sum of the 9 numbers in this square?
- Draw another square like this and find the sum.
- Is there any easy way to find the sum?

SUN ഞായർ	MON തിങ്കൾ	TUE ചൊവ്വ	WED ബുധൻ	THU വ്യാഴം	FRI വെള്ളി	SAT ശനി
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- Add the three numbers across and also the three numbers down.
- Draw another cross like this and find the sums.
- Note anything?

A part of a calender is show below. Find the missing dates.

11	12
18	19

- Nisha went to sleep at 9 night and did awake at 5 in the morning. How many hours did she slept?

- 28th of a month is Wednesday. What day will be the 7th of the same month?

- In 2013, February 1st is a Friday. How many Fridays will be in this month?

Joining Thousands 3

To school again

First day at school! The PTA gives laddus to all children.

Heard what Anu and Sanu told the teacher ?

How many laddus in all did they distribute?

How I did it

How my friends did it

1000
1000

School Diary

■ Diaries are brought in 3 packets. Number of diaries in each packet is written on it.

? How many in all?

.... + ... + ... = ...

Can you pack 1000 diaries into three boxes in a different way?

.... + ... + ... = 1000

How about your friend?

? Sanu also packed diaries in 3 boxes. Each box has between 325 and 340 diaries. One possible way to do this is

☐ + ☐ + ☐ = ☐

Suppose 1000 diaries are to be packed in 4 boxes. Write one way of doing this.

☐ ☐ ☐ ☐

Pack the diaries into any number of boxes, with the same number in all boxes. Can you do it?

Vegetable Garden

■ For making a vegetable garden children gave 1232 rupees and teachers gave 1425 rupees. How much in all ?

Children's share		2 thousands	6 hundreds	5 tens	7 ones
Children's share					
Teachers' share					
Total					

	2 thousands	6 hundreds	5 tens	7 ones

Shorthand ▶

$$\begin{array}{r} 1232\ + \\ 1425 \\ \hline 2657 \end{array}$$

Drinking Water

■ The PTA gave the Noon Meal Committee large vessels worth 3485 rupees to store boiled water and stainless steel buckets worth 2145 rupees to store food. How much was spent in all?

Cost of Vessels				
Cost of buckets				
Total				

	5 thousands	5 hundreds	12 tens	10 ones
	5 thousands	6 hundreds	3 tens	0 ones
	5 thousands	6 hundreds	3 tens	0 ones

We can write this

Thousand	Hundred	Ten	One
	①	①	
3	4	8	5	+
2	1	4	5
5	6	① 3	① 0

shorthand ▷

1 1
3485 +
2145
─────
5630

To the Bank

■ The school raised some money for the Education Aid Fund. It was decided to deposit it in a bank.

3 thousand rupees,
6 hundred rupees,
9 ten rupees and
5 one rupees from the
LP classes.

4 thousand rupees,
4 ten rupees,
8 hundred rupees
and 7 one rupees from the
UP classes.
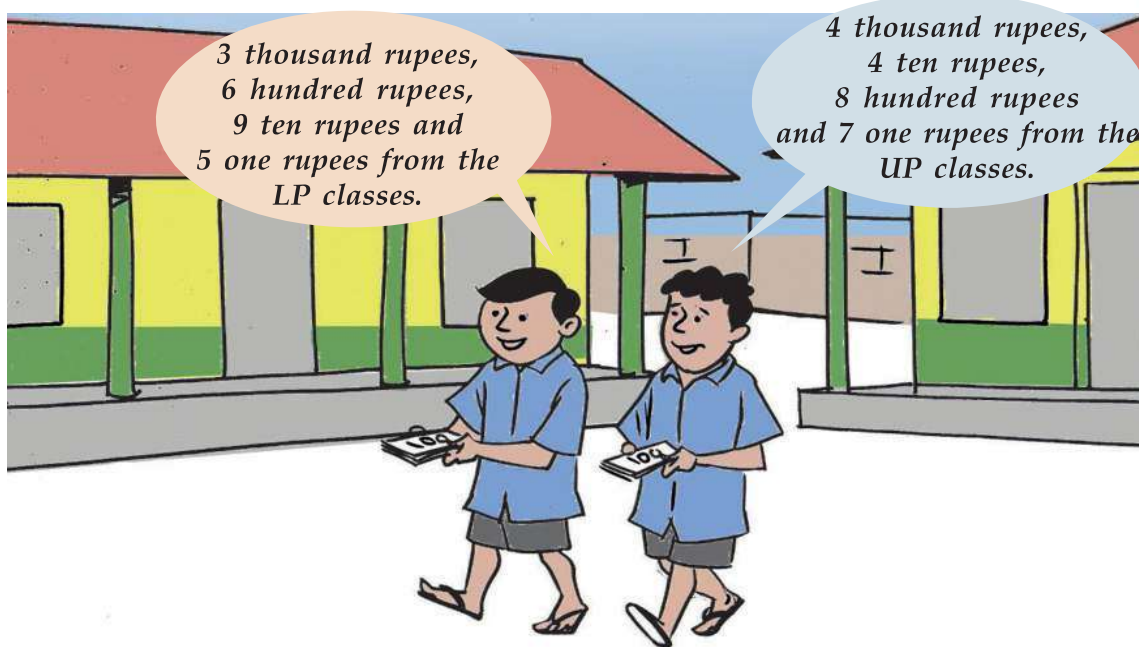
How much in all?

How do we find this?

● From LP classes ☐

● From UP classes ☐

44

LP			
UP			
Total			

7 Thousand	14 Hundred	13 Ten	12 One
①	①	①	
8 Thousand ①	5 Hundred ①	4 Ten ①	2 One
8 Thousand	5 Hundred	4 Ten	2 One

We can write like this

Thousand	Hundred	Ten	One	
① 3	① 6	① 9	5	+
4	8	4	7	
8	①5	①4	①2	

Shorthand

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

45

Notebooks

■ The *Nanma* Club in school distributed, 2345 unruled notebooks and 4678 ruled notebooks.

How many in all?

● How do we find it?

Just add 2345 and 4678

2345 + 4678

$$2345 = 2000 + 300 + 40 + 5$$
$$4678 = 4000 + 600 + 70 + 8$$
$$\overline{6000 + 900 + 110 + 13} \longrightarrow$$

$$\begin{array}{r} 6000 + \\ 900 \\ 110 \\ 13 \\ \hline 7023 \\ \hline \end{array}$$

$$\begin{array}{rcl} 2300 & + & 45 \\ 4600 & + & 78 \\ \hline 6900 & + & 123 \end{array} \longrightarrow$$
$$\begin{array}{r} 6900 \\ 123 \\ \hline 7023 \\ \hline \end{array}$$

$$\begin{array}{rcl} 2340 & + & 5 \\ 4670 & + & 8 \\ \hline 7010 & + & 13 \end{array} \longrightarrow$$
$$\begin{array}{r} 7010 + \\ 13 \\ \hline 7023 \\ \hline \end{array}$$

$$\begin{array}{r} 2345 \ + \\ 4678 \\ \hline 13 \\ 110 \\ 900 \\ 6000 \\ \hline 7023 \\ \hline \end{array}$$

$$\begin{array}{c} ①①① \\ 2\ 3\ 4\ 5 \ + \\ 4\ 6\ 7\ 8 \\ \hline 7①0①2①3 \end{array}$$

$$\begin{array}{r} 1\ 1\ 1 \\ 2\ 3\ 4\ 5\ + \\ 4\ 6\ 7\ 8 \\ \hline 7\ 0\ 2\ 3 \\ \hline \end{array}$$

(850) (850) (1250) (550) (2000) (2200) (1600) (1700)
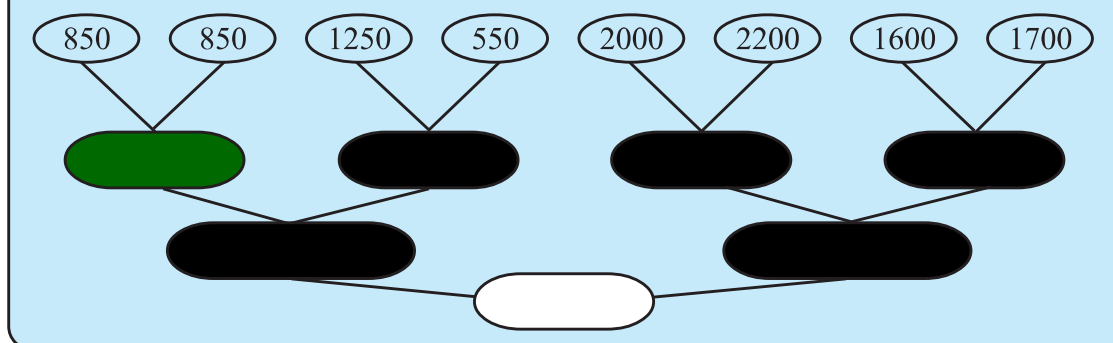
Chairs and Tables

■ The school bought new chairs for 2980 rupees and tables for 6420 rupees. How much was spent in all?

How do we find this?

For adding 2980 and 6420. Isn't it easier to add 3000 and 6400?

How i did it

How my frends did it

Noon meal

? Under the Noon Meal Programme, the school got 1850 kilograms of rice in July and 2050 kilograms in August. How much did they get in these two months together?

5999 +
1875
_____
?

Achu rewrote the problem and found the answer

6000 +
1874
_____
7874

999 + 99   = ?
4867 + 997 = ?

Savings

Anu deposited 1400 rupees in June and 1650 rupees in July. Her friend Sanu deposited 175 rupees more than Anu in June and 75 rupees less in July. Find the total deposits of Anu and Sanu. Who deposited more?

How do we do this?

-
-
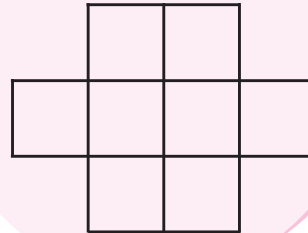
Me, about myself	Yes	No
I understood the steps to solve the problem.		
I understood how I can easily calculate the second deposit.		
I have made sure that I have done it right.		
I can explain the method of getting the answer and the operations with numbers.		

Sale

Day	Sale
Monday	2040 rupees
Tuesday	865 rupees
Wednesday	2025 rupees
Thursday	1890 rupees
Friday	2400 rupees

■ See one week's sale at the school store.

? How much did they get in the first two days of the week? ☐

? How much in the last two days of the week? ☐

? How much in the whole week? ☐

? On which day did they get the most? ☐

**?** Write the amounts from smallest to greatest

Lunch

The school buys vegetables for making children's lunch. 2725 rupees was spent in June for this and 675 rupees more in August. The amount spent in July is 175 less than the amount in August. The amount in September is 275 more than the amount in June.

? How much was spent in each of these four months?

? In which month was it most? And the least?

? How much was spent in all four months together?

Rice distribution

■ For *Onam*, 5 killogram of rice will be given to each child.

3600 kilograms in the first and 1900 kg in the second
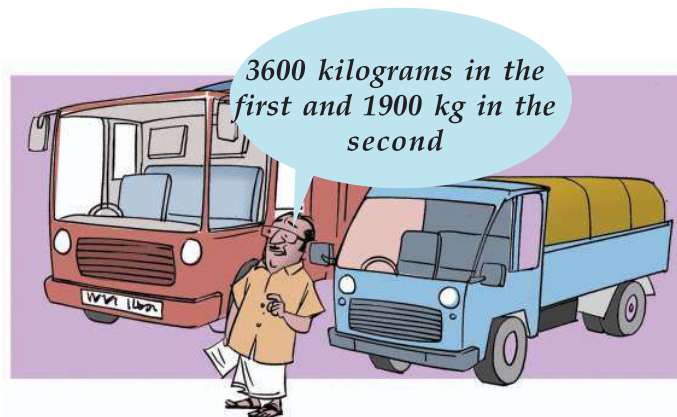
? How much rice is brought? ☐

5000 kilograms was distributed in two days. 1000 kilograms more was given on the second day than on the first.

? How much was given each day?

Milk distribution

■ The school buys milk from the Dairy Farmers Society.

❓ How much should be paid to the society for the two weeks together?

> *Last week 4704 rupees, this week 100 rupees less.*

■ *Complete the pattern*

- 1221, 1222, 1223, 1224, ..., ..., ...
- 1221, 1231, 1241, 1251, ..., ..., ...
- 1221, 1321, 1421, 1521, ..., ..., ...
- 1221, 2221, 3221, 4221, ..., ..., ...
- 1221, 1232, 1243, 1254, ..., ..., ...
- 1221, 1332, 1443, 1554, ..., ..., ...,
- 1221, 2332, 3443, 4554, ..., ..., ...,

■ Write four different number patterns starting with 4325

Construct a magic square using the numbers

1054, 3390, 2806, 1638, 3098, 2514, 1930, 1346, 2222

	2222	

Do it in head

$$450 + 475 = 450 + 450 + 25$$

Two 450 and one 25 gives $= 925$

$$1500 + 1525 = \, ?$$

$$2500 + 2547 = \, ?$$

$$1250 + 1270 = \, ?$$

$$1450 + 1350 = \, ?$$

50

Magic Square

■ In this magic square, one number is incorrect. Find that number ☐

⍰ Add the numbers across, down and from corner to corner.

4150	1875	3500
2525	3175	3825
4850	4475	2200

Cloth Exhibition
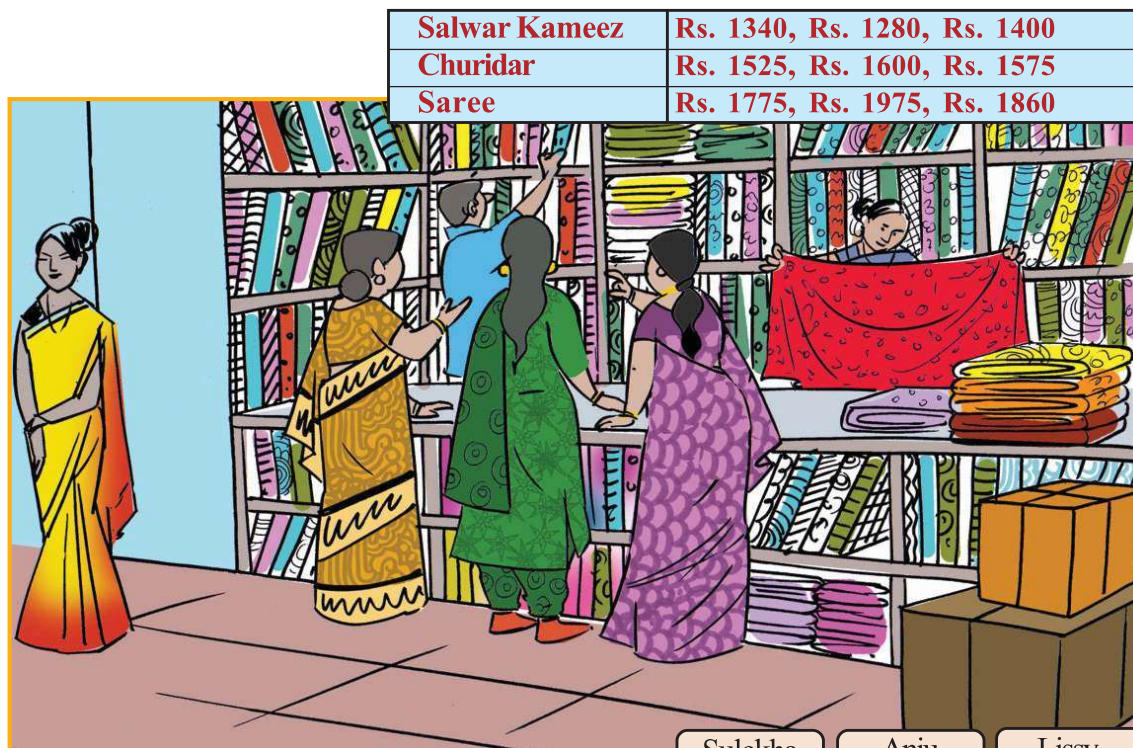
Salwar Kameez	Rs. 1340, Rs. 1280, Rs. 1400
Churidar	Rs. 1525, Rs. 1600, Rs. 1575
Saree	Rs. 1775, Rs. 1975, Rs. 1860

Sulekha	Anju	Lissy
3500	3200	3350

⍰ Sulekha had 3500 rupees, Anju 3200 rupees, and Lissy 3350 rupees. Each spent the entire amount to buy two dresses. What could these be?

⍰ What is the minimum amount needed to buy one dress of each kind? ☐

Buy Three

■ Sarang has 8000 rupees with him.

- Mixer Rs. 3450
- Torch Rs. 1305
- Iron   Rs. 1000
- Pressure cooker Rs. 3755
- Gass stove Rs. 3245
- Fan Rs. 3550

? Sarang spent all he had to buy 3 things. What could these be?

How I did it

How my friends did it

? Find the sum of the consecutive numbers from 1 to 10

? What about the sum of the consecutive numbers from 11 to 20? How did you find it?

? What is the sum of 10 consecutive numbers from 41?

Deposit

■   The bank deposits of Babu, Nafiya and Johny are 1420 rupees, 1580 rupees and 1605 rupees. Sithara's deposit is half the sum of the deposits of Babu and Nafiya.

Bindhu's deposit is 120 rupees more than the sum of the deposits of Johny and Nafiya

Thahira's deposit is equal to the sum of the deposits of Sithara and Bindhu.

What is the deposit of Thahira ?

Based on these, make some questions to ask your friend.

- Whose deposit is the least?
-
-
-

Large and Small

The sum of the largest two digit number and the largest one digit number.

99 + 9 = ...

The sum of the largest three digit number and largest two digit number

.... + ... = ...

The sum of the largest four digit number and the largest three number

.... + ... = ...

The sum of the largest two digit number and the smallest two digit number

99 + 10 = 109

The sum of the largest three digit number and the smallest three digit number

999 + 100 = ...

The sum of largest four digit number and the smallest four digit number

.... + ... = ...

Development Fund

? The members of the PTA raised some money for the School Development Fund, in 5 groups. The third group got 600 rupees more than the first group and 400 rupees more than the second group. The fifth group got 550 rupees more than the fourth group and the third group got 200 rupees less than the fourth group. The fouth group got 4200 rupees. Find the amount raised by each group. What is the total amount raised for the development fund?

Do in your head

- 3747 + 2836 = 6583

Do the sums below in head.

- 3749 + 2834 = ?
- 3749 + 2839 = ?
- 3746 + 2834 = ?
- 3746 + 2839 = ?

- 5469 + 2537 = 8006

- 5437 + 2569 = ?
- 5539 + 2467 = ?
- 2569 + 5437 = ?

A number game

	6000			
		2675	4001	
3867				90
	2550	4905		
2600		3688		875
1340			1000	
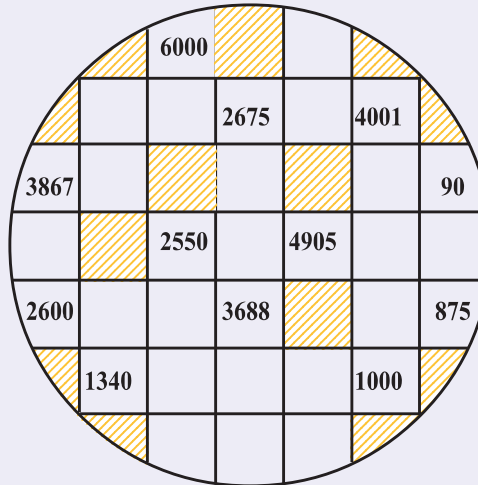
A game for two players. The first player puts a counter on an empty square and moves to the next square, left, right, up or down (but not diagonally) should not move to an empty square or a square already visited. The score is the sum of the numbers on the squares visited. The one with highest score wins.

Onam Sales

Kudumbashree had 3 stalls in the four day Onam Fair. The first stall got Rs.3405, Rs.3528, Rs.3780, Rs.3500. The second stall got Rs.2966, Rs.3600, Rs.4250 and Rs.3497. The third stall got Rs.2998, Rs.3570, Rs.4306 and Rs.3100.

Shall we make a table?

? Which stall got the most, taking all four days together?

? Which day got the most, taking all three stalls together?

More and Less 4

How far?

■ Children of Poomala school are on a trip to Thiruvananthapuram; 496 Kilometres away. They reached kozhikode, travelling 85 kilometres.

? How much more they need to travel, to reach Thiruvananthapuram? [   ]

They had their lunch at Ernakulam. By then, they had travelled 188 kilometres from Kozhikode.

? How much further to Thiruvananthapruam? [   ]

They returned through kottayam. The distance to Poomala by this route is 502 kilometres. The distance from Thiruvananthapuram to Kottayam is 151 kilometres.

How much further must they travel from Kottayam to reach Poomala?

Cost of food

They had decided to spent 8540 rupees on food for the three day trip. They spent 2326 rupees on food on the first day.

How much more can they spent on food?

$$8540 -$$
$$2326$$

We cannot subtract 6 from 0

Lets' subtract 26 from 40

$$8000 + 500 + 40 -$$
$$2000 + 300 + 26$$
$$6000 + 200 + 14$$

6214 rupees left.

Second day they spent 3344 rupees on food.

How much is left?

We cannot subtract 40 from 0

Nor 300 from 100

$$6214 -$$
$$3344$$

6000	+	200	+	10	+	4	−	
3000	+	300	+	40	+	4		
6000	+	100	+	110	+	4	−	
3000	+	300	+	40	+	4		
5000	+	1100	+	110	+	4	−	
3000	+	300	+	40	+	4		
2000	+	**800**	+	**70**	+	**0**		

How about this?

2870 rupees left.

Thousands	Hundreds	Tens	Ones
	1	**10**	
6	2 (1)	1	4
3	3	4	4

Thousands	Hundreds	Tens	Ones
6	1	11	4
3	3	4	4

Thousands	Hundreds	Tens	Ones
5	**10**		
6 (1)	1	11	4
3	3	4	4

Thousands	Hundreds	Tens	Ones
5	11	11	4
3	3	4	4
2	8	7	0

Easy Way

How about doing all these together?

```
        5    11   11
      6(1) 2(1) 1    4   –
        3    3    4    4
      ─────────────────────
        2    8    7    0
```

$$6214 - 3344 = 2870$$

2870 rupees left on the third day.

Find the speciality

Draw dots like this and write the numbers in the next few pictures in order.

```
  •      •        •
•    • •        • •
              • • •
               • •
1      3        6
```

Subtract the smaller number from the larger number in the same position

For example, $1 - 1 = 0$,

$4 - 3 = 1$

```
  •      • •      • • •
•      • •      • • •
               • • •
1      4        9
```
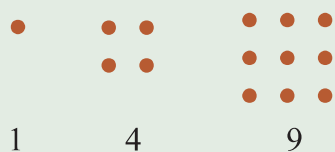
Note anything strange?

? On the third day, they spent 3000 rupees on food. How much more did they spend on food than expected?

Only 2870 rupees was left for food. They spent 3000 rupees.

How much more is 3000 than 2870?

30 added to 2870, gives 2900

What should be added to 2900 to get 3000?

How much more in all?

Another way

$$3000 - 2870 \quad \Rightarrow \quad \begin{array}{c} 3000 - 1 \\ 2870 - 1 \end{array} \Rightarrow \begin{array}{c} 2999 - \\ 2869 \\ \hline 130 \end{array}$$

Instead of subtrating from 3000, we can subtract 2870 from 2999 and then add1.

? Like this, subtract 3407 from 5000.

How many students?

? Last year, Poomala School had 1248 children. This year, 98 left the school and 125 others joined. How many are there in the school, this year?

How I did it.

How my friends did it.

? The admission number of the first student who joined in class 1 this year is 3946 and the admission number of the last student is 4007. How many students are now in class 1?

Do we get this by subtracting 3946 from 4007?
Why not?

My tree

■ Poomala school got 1042 saplings under the *My Tree* programme. Of these, 342 were teak, 167 mango, 257 mahogany, 8 sandalwood and the rest jackfruit.

? How many saplings were distributed to the children?

? How many jackfruit saplings did they get?

? After three months 68 saplings distributed to the children withered and died. How many are left?

> We can plant the sandalwoods in the school and the rest we can distribute among the children.

How I did it.

How my friends did it.

Me, about myself	Yes	No
I understood what is to be found out		
I knew how to do it		
Able to do calculation in head		
Did computations correctly		

Amal's class got some children's Day stamps. On Monday 18 children bought stamps and on Tuesday 12 children bought stamps.

How many stamps were left after Monday? ▢

After Tuesday? ▢

Let's look at it this way.

How many stamps were bought in all? ▢

How many are left? ▢

Which method is easier?

Total Amount

■ Amal's father is a labourer and he could find work only on Monday, Wednesday, Friday and Saturday last week. He got 650 rupees on Monday and 750 rupees on Saturday. He got the same amount on Wednesday and Friday. Altogether, he earned 2750 rupees.

❓ How much did he get on Wednesday and Friday together?

❓ How much did he get on each of these days?

Milk Math

■ Amal's family started to sell milk to the society from September. They got 3340 rupees on September, 4265 rupees on October and 3768 rupees on November. How much did they get on these three months together?

❓ How much more in September than October?

❓ How much less in November than October?

❓ What difference is between the amounts made on September and November?

❓ Cattle feed and other expenses amounted to 2004 rupees in September, 2770 rupees in October and 2070 rupees in November. How much money did they actually make each month?

Father was born in 1976 and son in year 2005

❓ What is the difference between their ages?

❓ What are their ages now?

Ask other members of you family about their ages. From this, can't you find the years they were born?

■ Make questions like these to ask your friends.

Labha prabha

■ In Amal's home, the electricity meter showed 1866 units at the end of February and 2165 units at the end of March.

? How many units did they use in March?

They decided to join the '*Labha prabha*' scheme and reduce electricity usage. At the end of April, the meter showed 2402 units.

? Could they reduce usage by joining Labha prabha?

? By how many units?
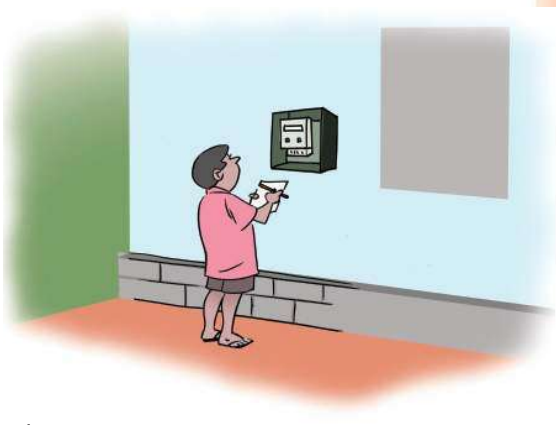
A trip

- Amal's father and mother got into a bus to the town. Fare is 18 rupees for each. Father gave the conductor a 100 rupee note. Conductor first gave back 2 two-rupee coins and said 40; then he gave 3 twenty-rupee notes and said 100.

? How do you explain this?

I also can!

- Find out the electricity meter readings in your home and your friends' homes, at the end of this month and at the end of the next month. Calculate how many units are used in each house.

- In whose home is the usage the least?

- Think about the ways to reduce electricity use. Carry out these plans with the help of your friends.

$$7634 - 5326$$

One of the numbers is the answer. Can you find out which, without actual subtraction?

3506, 2405, 2308, 708

Family Budget

■ See Amal's household budget for October. Fill in the missing numbers.

Income	Rs.	Expense	Rs.
Agriculture selling	4735	Food	
milk	4265	Travel	500
		Electricity	400
		Telephone	330
		Cloths	460
		Entertainment, Newspaper, Magazine	480
		Education	325
		Health	400
Total		*Total*	7445

? What is the difference between income and expense?

Make your own household budget for one month like this.

Let's do

? The price of a new Mobile phone is 3450 rupees. The old one is sold for 780 rupees. How much more is needed to buy the new phone?

■ Anamala School has LP, UP and highschool classes and there are 2060 children in all. There are 358 children in the LP classes and 449 children in UP classes.

◼ How many children are there in high school classes?

◼ How many more children are there in the high school classes than in the UP classes?

Which of the following gives 2550?

- 7200 − 4750
- 6300 − 3750
- 5800 − 3650

$$2407 - 1539 = 868 \qquad 2407 - 1539 = 978$$

Without actual subtraction, can we say which answer is correct?

? The price of a TV is 6780 rupees and that of a DVD player is 2490 rupees. Bought together, the price is reduced by 1390 rupees. How much is needed to buy them both?

? The Anamala ward has 1780 people. There are 80 more women than men. Find the number of women and men.

6006 – 3987	13 added to 3987 gives 4000, 2000 added to 4000 gives 6000. 6 added to 6000 gives 6006

$$2000 + 13 + 6 = 2019$$

6530 – 2520	2500 subtracted from 6500 gives 4000 20 subtracted from 30 gives 10.

$$4000 + 10 = 4010$$

Are there other ways to find these?

Do in your head

$$5982 - 3694 = 2288$$
$$5980 - 3694 =$$
$$5982 - 3692 =$$
$$5980 - 3692 =$$
How did you do them?

Multiplication and Subtraction

$$(2 \times 2) - (1 \times 1) = 3$$
$$(3 \times 3) - (2 \times 2) = 5$$
$$(4 \times 4) - (3 \times 3) = 7$$
$$(9 \times 9) - (8 \times 8) = ...$$

Complete the Number Wheel

■ Fill in the missing numbers. The inner number subtracted from the outer number should be 4023.

Outer numbers: 7014, 7462, 6104, 9006, 5011, 8000, 7058
Inner numbers: 3035, 4023

Budget

■ Ramu is a farmer. Looking up the expenses for the past four years, he says,

"Last year's expense was 1439 less than this year's. Year before that, it was 2496 rupees less than that of last year. First year's expense was 4429 rupees less than this year's. This year, I spent 9827 rupees."

? What is the total expense in all four years together?

? What is the least amount spent?

63
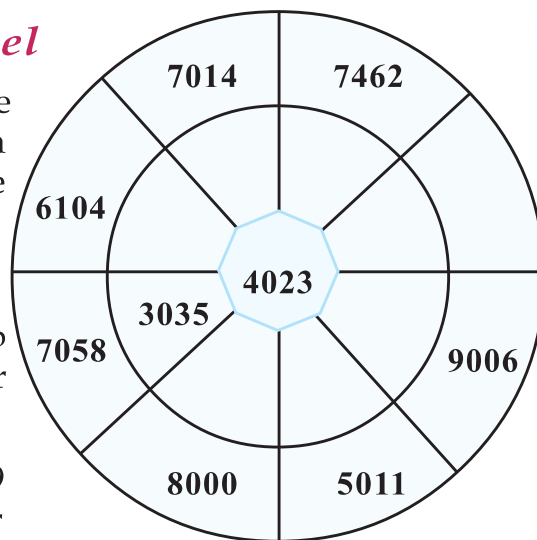
Help the beetle

The beetle can't drink the honey from one of the flowers. It is the flower whose number is not the difference of any pair of numbers in the middle. Find that flower.

191 3944 5222 767 4135

1087 3998
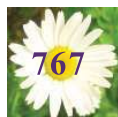
4096	6087	865
98	4809	5000

713 1278

3231 1998

904 4711 1991 5989 4902

$3 \times 3 - 1 \times 1 = 4 \times 2$

$4 \times 4 - 2 \times 2 = 6 \times 2$

$5 \times 5 - 3 \times 3 = 8 \times 2$

....

....

$12 \times 12 - 10 \times 10 = ...$

$4 \times 4 - 1 \times 1 = 5 \times 3$

$5 \times 5 - 2 \times 2 = 7 \times 3$

$6 \times 6 - 3 \times 3 = 9 \times 3$

....

....

$13 \times 13 - 10 \times 10 = ...$

- Find the relation and fill in the missing numbers.
- Try to find other patterns like these.

Income and Expense

■ See the monthly budget of Shiji Teacher last month

Item	Estimated expense (rupees)	Actual expense (rupees)
Food	5400	4896
Cloth, Travel, Medicine, Celebrations	2625	2980
Telephone, Electricity, TV, Newspaper, Internet	2075	1948
Others	2500	3075

? Is the actual expense for the month more or less than the estimated expense?

? Which are the things for which the actual expense is more than the estimated expense? How much more?

? Which are the things for which the actual expense is less than the estimated expense? How much less?

Drawing shapes 5
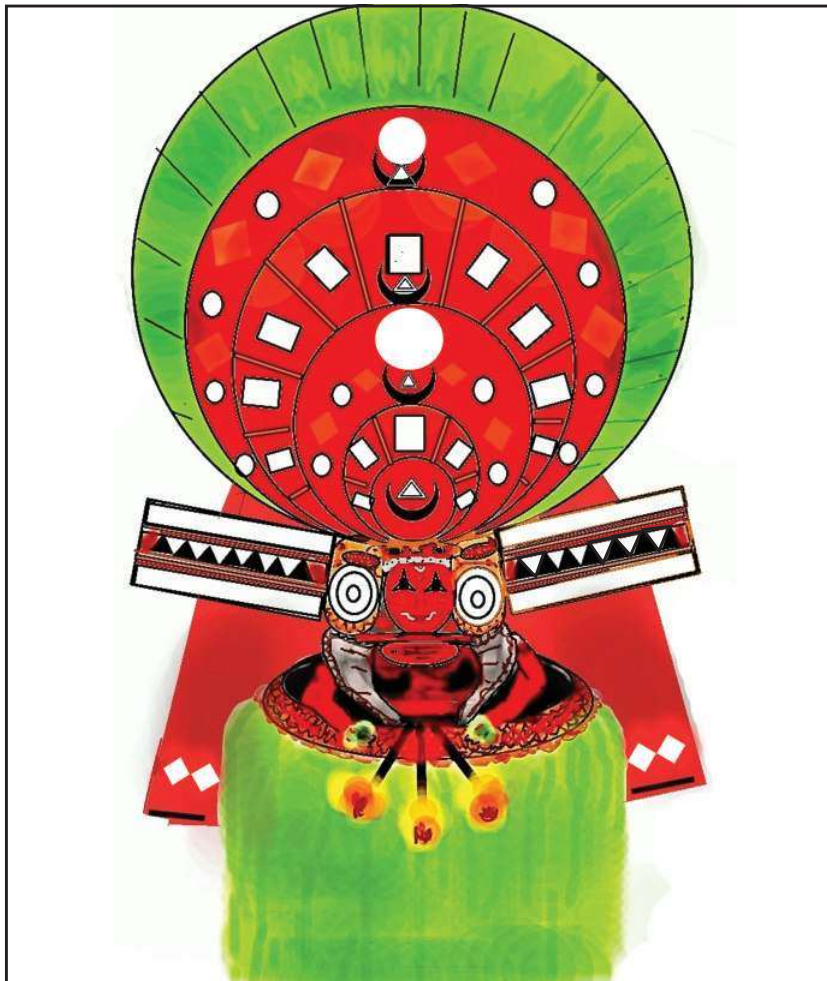
The picture shows an art form. Do you know what this is called?

Do you see any geometrical shapes you are familiar with?

Colour all triangles red.

Colour the circles and rectangles as you like, to make a pretty picture.

? You have coloured different shapes. How do we actually draw them?

? What all things can we use to draw circles?
Coins, ...

See circles drawn inside a rectangle.
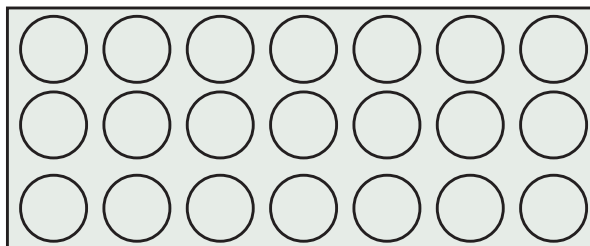
Inside this circle, draw circles of same size

How many circles did you draw?

How many circles did your friend draw?

In your class who drew the most circles?

How many?

A circle is perfectly round
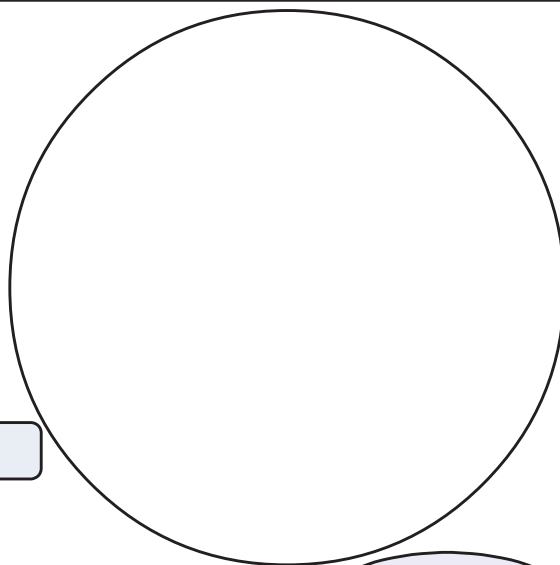
Inside the circle
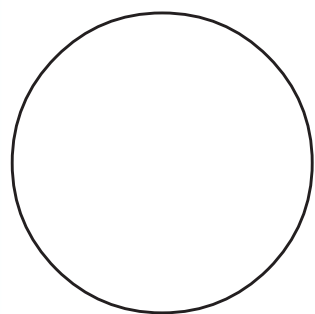
■ Using a coin, draw a circle in the middle of this circle.

■ In this rectangle, draw a circle in the middle
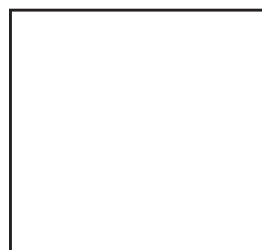
Rectangles and rectangles

■ In each figure, draw a line to make two rectangles
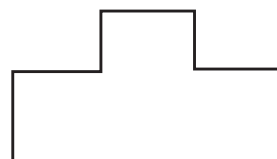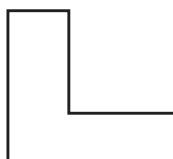
■ Draw a line to make a rectangle and a triangle
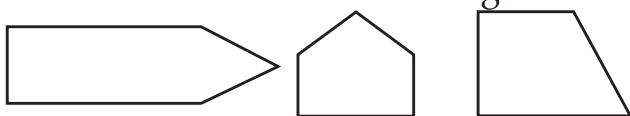
■ Draw two lines to make rectangles. Write the number of rectangles.
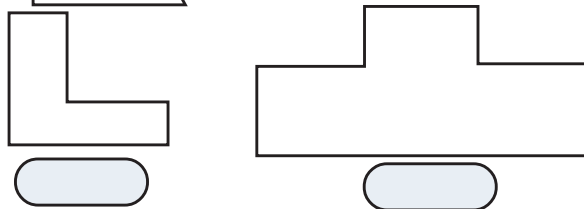
■ Did your friends also get the same number of rectangles?

Which is rectangle?

? Which of the figures below is a rectangle?

? Why?

What I found out

- One line must be straight up from nearby lines
-
-
-

Find and colour

? Anu has drawn several figures. Which of them are rectangles?

1   2   3   4   5

What I found out

	1	2	3	4	5
It has four sides					
It has four corners					
Opposite sides are equal.					

- Colour the rectangles you have found out.

Side and Corner

■ Anju and her friends are making greeting cards for the Teacher's Day.

? How do you cut a thick sheet of paper to make rectangular greeting card?

-
-

How do we get the corners right?

Check it with a right corner

You can use this to check corners.
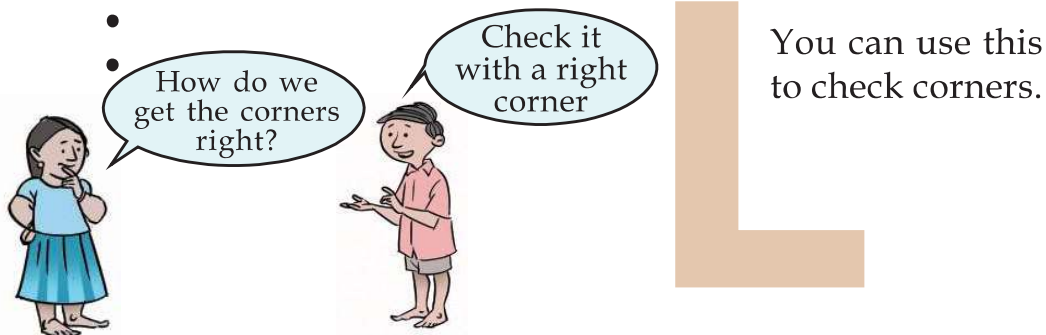
- Lengths of the four sides of the card I made

☐ cm ☐ cm ☐ cm ☐ cm

- Lengths of the sides of the cards my friends made

Name	Sides of card			
	......cm	......cm	......cm	......cm

- Who all made cards with all the properties of a rectangle?

Make and find

■ Cut out several *eerkkil* pieces of lengths 10 centimetres, 8 centimetres, 6 centimetres and 5 centimetres. Make four sided figures with sides of lengths given below.

1	10 cm,	8 cm,	10 cm,	8 cm.
2	10 cm,	6 cm,	6 cm,	5 cm.
3	8 cm,	6 cm,	6 cm,	8 cm.
4	5 cm,	5 cm,	10cm,	8 cm.
5	6 cm,	10 cm,	10 cm,	6 cm.
7	8 cm,	8 cm,	8 cm,	8 cm.

? Which of these are not rectangles? Why?

-
-
-
-

> Remember the properties of a rectangle?

8 cm

■ See the rectangle Anu made.

? What is special about this rectangle?

8 cm   8 cm

8 cm
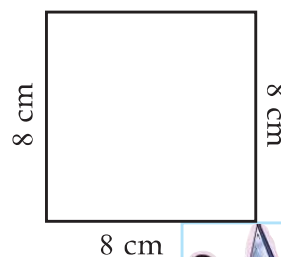
> Rectangle with all sides equal is a square

Geometrical shapes

Geometrical shapes can be drawn using a computer. Geogebra is a program to do this. In the IT@School Ubuntu, you can start by clicking

`Application` → `Education` → `GeoGebra`

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■ Look around you and find rectangular, triangular and circular objects. Write them down.

Object	Shape
• Coin	Circle
• Black board	....
•	
•	
•	
•	
•	

Paddy field

50 cm

80 cm

? Kuttappan has a rectangular paddy field. Each day, he walks around the field and inspects it. How many metres does he walk in one trip around?

How I did it.

How my friends did it.

Sticks and rectangles

6 cm   5 cm

10 cm
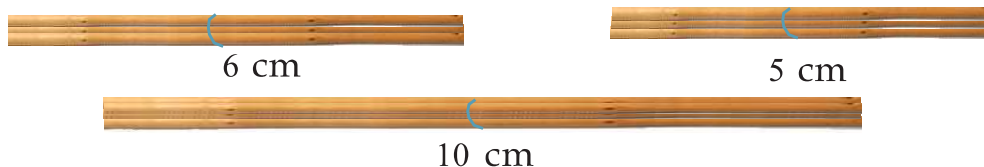
Look at the bunches of sticks. How do we make rectangles with these?

We need four sticks to make a rectangle

There must be two pairs of the same length.

■ See the rectangle Basheer made

6 cm

10 cm
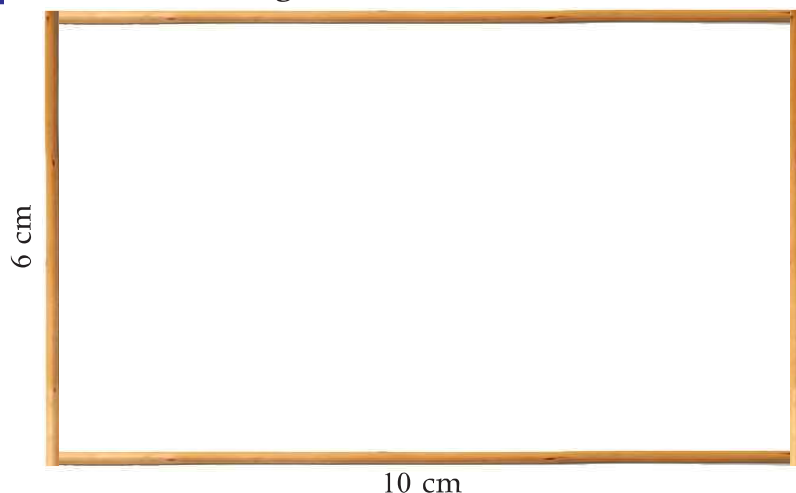
Sum of the four sides of a rectangle is its perimeter

? Find the total length of all the four sticks Basheer used. ☐

Perimeter of rectangle is twice the sum of one pair of horizontal and vertical sides

Perimeter of a square

Asha made a square with sticks of length 10 cm.

Its perimeter = ☐ cm

The perimeter of a square is four times the length of one side.

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Let's find the perimeter

■ Find the perimeter of these figures

3 cm

3 cm | 3 cm
3 cm

Perimeter [____]

4 cm | 4 cm
5 cm

Perimeter [____]

3 cm

8 cm | 8 cm

3 cm

Perimeter [____]

6 cm

2 cm | 2 cm
6 cm
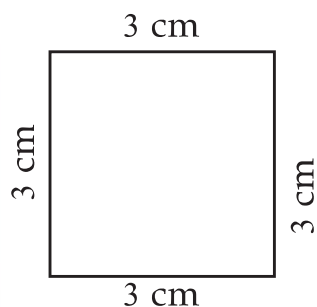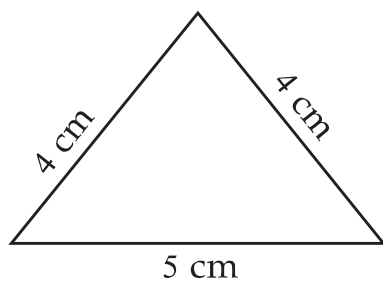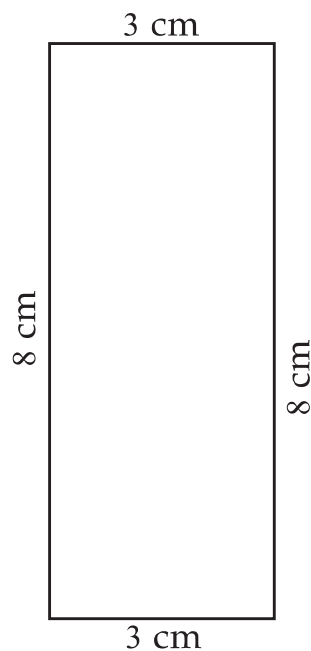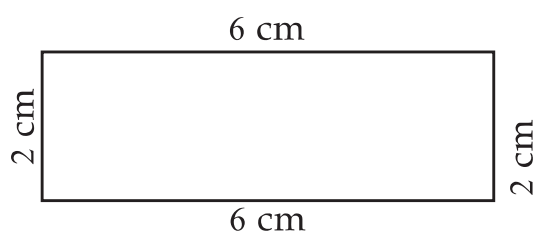
Perimeter [____]

> The perimeter of any figure is the sum of the length of all its sides.

Other shapes
Find the perimeters of these figures (Lengths are in centimetres)

4   4
3   3
5

3   3
4   4
3   3
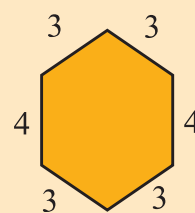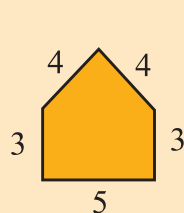
Fencing a garden

■ Wire fences are to be put around the rectangle gardens in the school - the rectangular okra patch the square spinach patch

5 metre

7 metre

4 metre

? The cost of fencing one metre is 20 rupees. What is the cost of pulling up one line of fencing around?

> There are other ways to get the answer!

Perimeter of the okra patch = ☐ metres

Perimeter of the spinach patch = ☐ metres

Total perimeter of both patches = ... + ...

Cost of one line of fencing = 20 × Perimeter = ☐ rupees

? What is five lines of fencing are made? ☐ rupees

Let's do

? The length of a rectangle is 6 cm and the breadth is 4 cm. What is its perimeter?

? The length of a rectangle is 8 cm and its perimeter is 24cm. What is its breadth?

? The sum of the length and breadth of a rectangle is 14 cm. What is its perimeter?

? The perimeter of a rectangle is 22 cm. What are the possible length and breadth?

? Complete this rectangle and find its perimeter

? Complete the triangle. Find its perimeter.
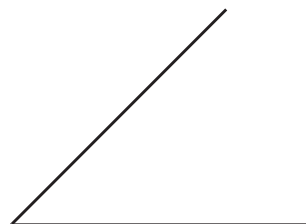
? The perimeter of a triangle is 30cm. Two of its sides are 10 cm and 9 cm long. Find the length of the third side.

? The perimeter of a square is 20cm. Find the length of one side.

Rectangle and triangle

8 cm

6 cm

figure (1)

10 cm
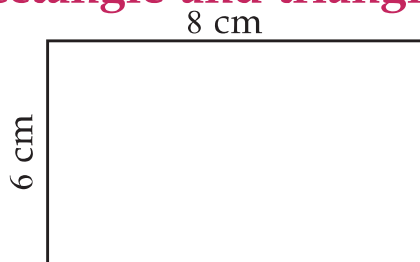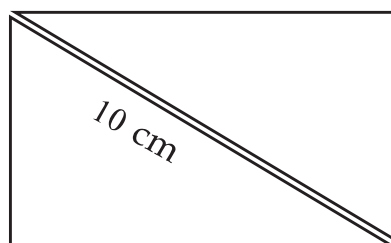
figure (2)

▪ The rectangle in figure (1) is cut through the opposite corners to make two triangles. See figure (2)

Perimeter of the rectangle in figure (1) = ☐

Sum of the perimeters of the triangles

in figure (2)= ☐ + ☐ - ☐

Matchstick rectangles

▪ Children are making rectangles with matchsticks. Each has 20 matchsticks. What can be the lengths and breadths of these rectangles?

Group	Length wise	Breadth wise	Total
1	8 + 8 = 16	2 + 2 = 4	20
2	... + ... = 10		
3			
4			
5			

How I did it.

How my friends did it.

Wire rectangle

? Annie has a piece of wire 24 centimetre long. She wants to make a rectangle with this. What are possible length and breadth?

? If she makes a square, what is the length of its side?

Up and down

? The large triangle has all sides 6 cm long. What is its perimeter?

[ ] cm

The points at the middle of its sides are marked and joined to make a new triangle.

The length of each side of this triangle: [ ] cm

Perimeter [ ] cm

The midpoints of the sides of the second triangle are marked and joined to make yet another triangle.

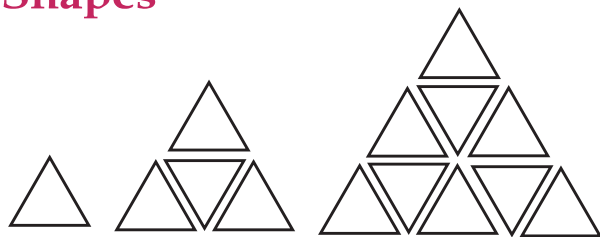Length of each side of this triangle [   ]

Perimeter [   ]

? Mark 3 points on a paper. Draw lines joining these points. Do you get a triangle? Do we get a triangle by joining three points, whatever be their position?

? Continue the pattern by joining suitable points.
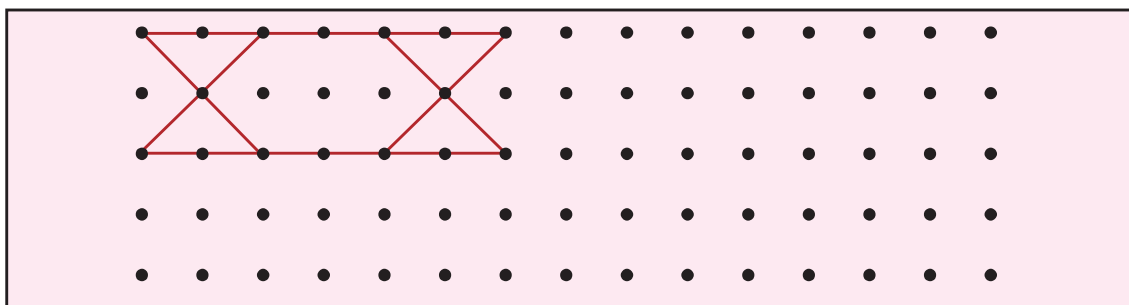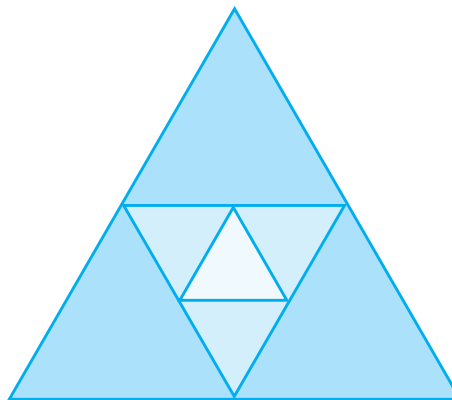
Draw dots like this and make new patterns.

Joining Shapes
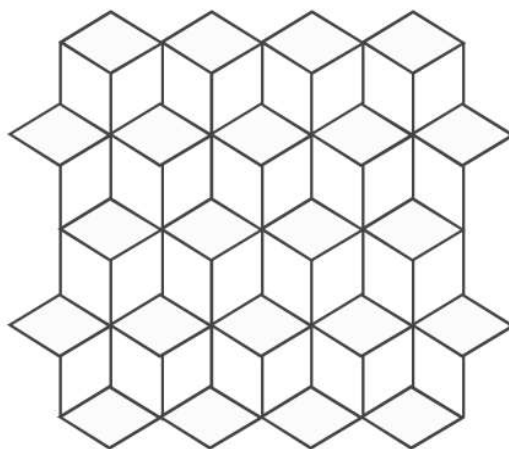

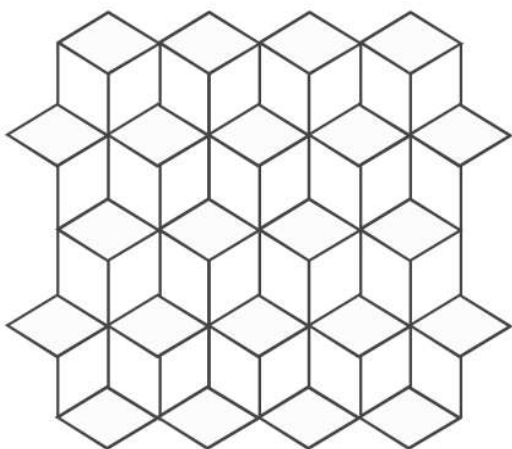Draw the next figure

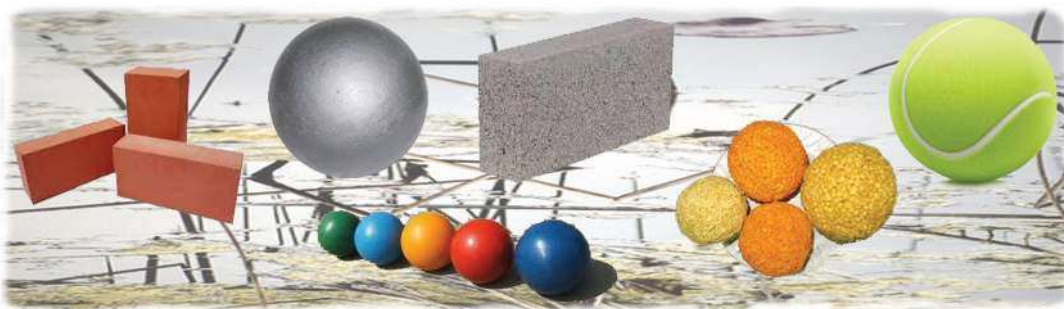How many treangles in it? ☐

■ Colour the picture on the right, using the same colours as in the left
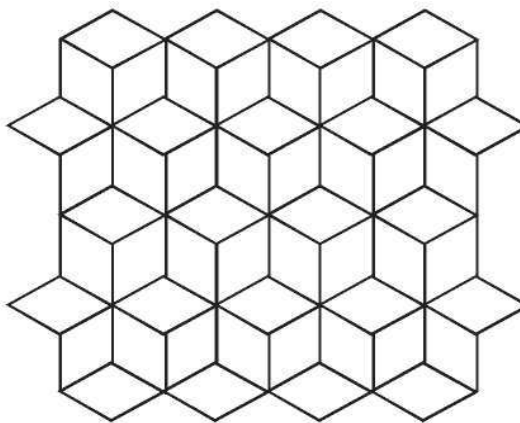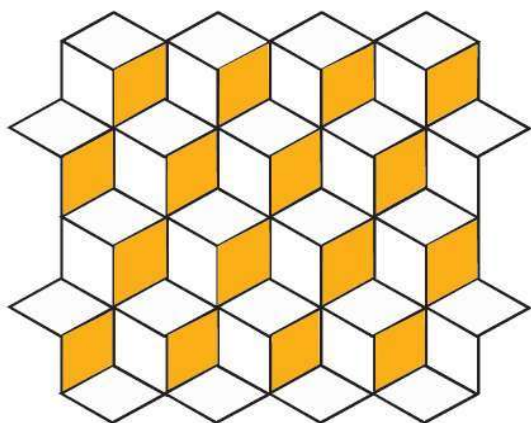
Colour these pictures in different ways

Some shapes

Have you seen such shapes?
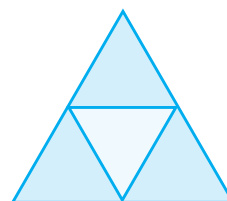
Write the things you know, of these shapes.

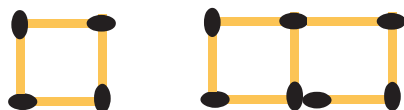| Rectangular block	Sphere
•	•
•	•
•	•
•	•

How many

? How many rectangles in all in the picture? ☐

? How many triangles in this picture? ☐
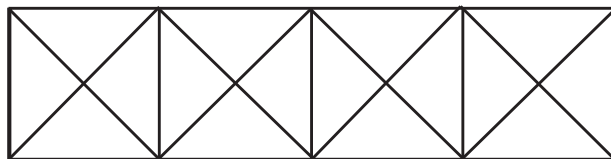
Eerkkil figures

? How many *eerkkil* bits in the first rectangle? ☐

? How many *eerkkil* bits in the second figure? ☐

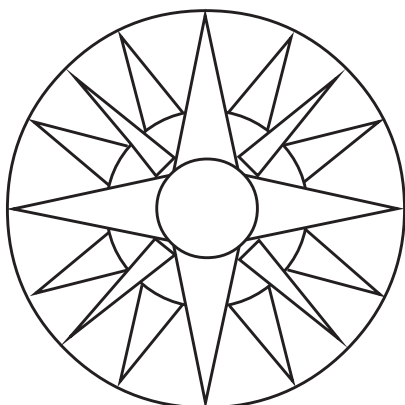? To make a figure of 3 rectangles, how many *eerkkil* bits do we need? ☐
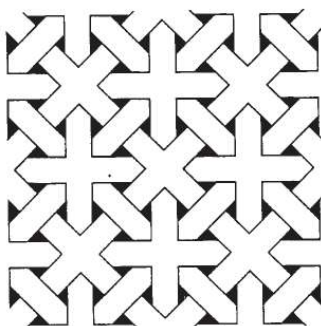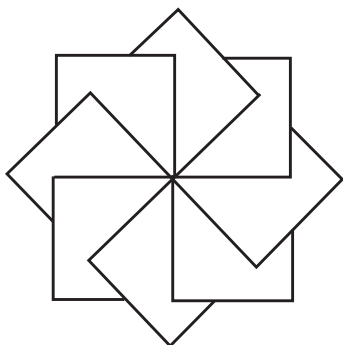
Squares

? How many squares? ☐

Perimeter

■ What is the perimeter of a square of side 10 centimetres? ☐

This square is cut through the middle to make two rectangles, What is the perimeter of each rectangle? ☐

Colour the figures

Looking back

Learning outcomes	On My Own	With teacher's help	Must imporve
Lesson 1: Among Four Digit Numbers			
• To write consecutive numbers, starting from a specified number (up to 10000)			
• To write and read four-digit numbers			
• To interpret four-digit numbers according to context			
• To split and develop four-digit numbers according to place value			
• To explain the method of comparing four digit numbers			
• To write the numbers using a specified number of digits, with or without repetition			
• To find out and explain the scheme of number patterns			
• To solve practical problems invloving four-digit numbers			
Lesson 2: Wheel of Time			
• To explain the relations between hours, minutes and seconds			
• To tell time by a clock or watch			
• To convert 24-hour clock to 12-hour clock and the other way round			
• To tell time in am/pm			
• To solve practical problems involving time			
• To understand and make conclusion from time tables			
• To estimate lengths of time			
• To write dates of the Common Era in the date/month/year form			
• To find out and write dates in Saka Era, Hijra Era and Kollavarsha from a calendar			
• To draw a timeline			

Learning outcomes	On My Own	With teacher's help	Must imporve
Lesson 3: Joining Thousands • To solve practical problems involving addition • To explain methods of solution • To do calculations in head • To tabulate data, as a part of solving problems • To explain schemes of forming number patterns • To estimate the result of calculations			
Lesson 4: More and Less • To solve practical problems involving subtraction • To explain methods of solutions • To explain methods of checking the correctness of solutions • To do calculations in head • To tabulate data, as a part of solving problems • To explain schemes of forming number patterns • To estimate the result of calculations			
Lesson 5: Drawing Shapes • To recognize shapes such as rectangles, triangles and circles from the surroundings • To draw circles using circular objects • To draw rectangles and triangles, of no specified measures • To explain the method of calculating the perimeter of rectangles and triangles • To estimate the perimeter of rectangles • To find out rectangles of the same perimeter with different lengths and breadths and to explain the method • To find out geometric patterns in real life • To draw geometric figures correctly • To classify three dimensional objects according to shape.			