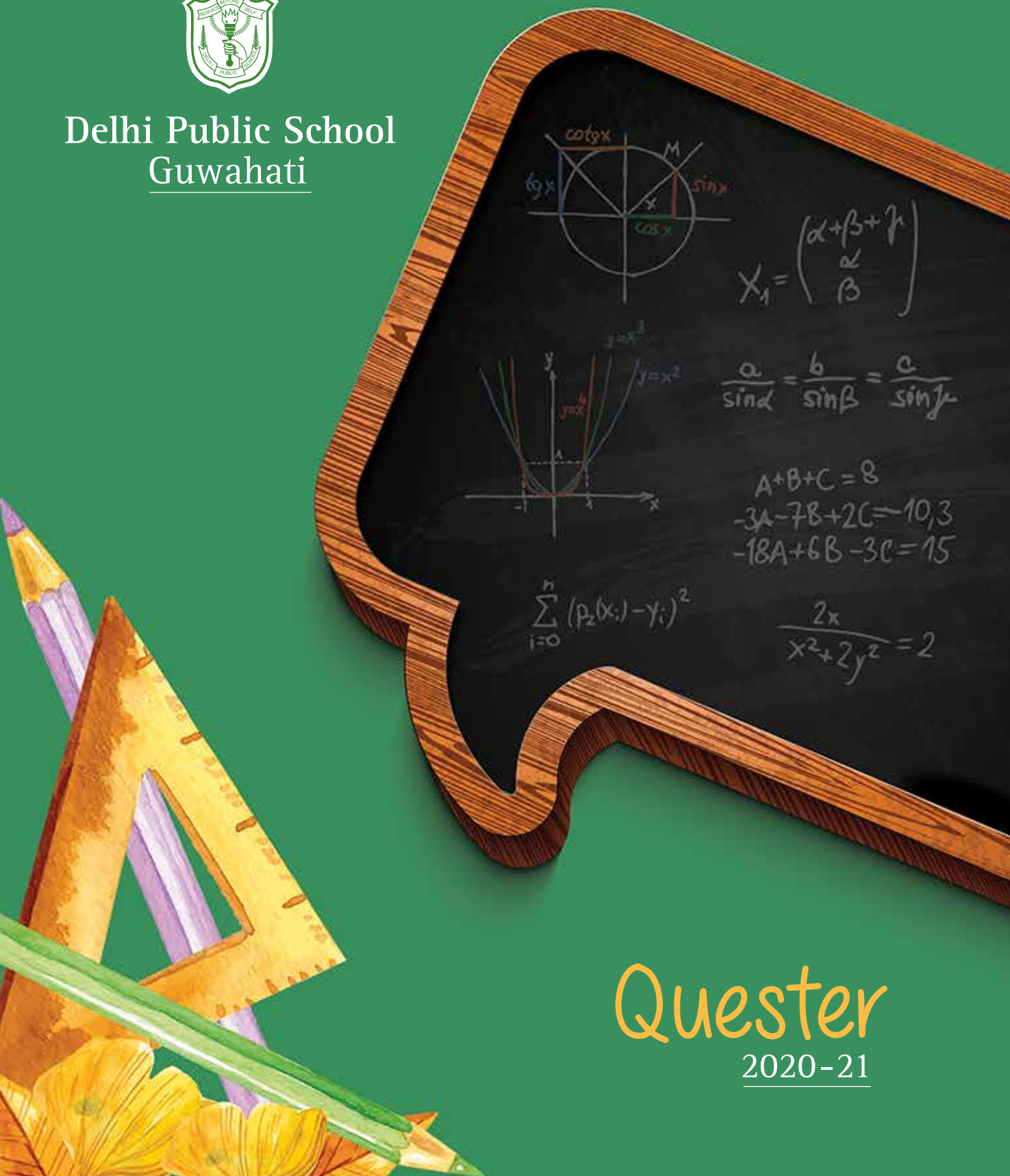
Delhi Public School
Guwahati



Quester

2020-21

The Desk of Principal

Chandralekha Rawat

Principal

Albert Einstein had rightly said, “Pure mathematics is, in its way, the poetry of logical ideas.”

Our Maths Magazine ‘Quester’ is one such attempt to provide a platform for students to express their creative pursuit on numbers and geometry, and have logical reasoning in their thoughts. It is meant to garner diverse thoughts and expressions together. I am delighted to see that the amalgamation of creativity and logic has been transformed into such a wonderful tangible form.

The magazine contains a wide range of mathematical topics including the origin of mathematics, its history and its connection with other disciplines.

I congratulate the staff and students for their endeavour and hope they continue on this journey towards excellence.

From the desk of HOD

Sanjay Mazumder

HOD, Deptt. of Mathematics

Dear Readers,

The famous Mathematician Georg Cantor had rightly said, **"In mathematics the art of proposing a question must be held of higher value than solving it"** Mathematics is a subject which makes our life orderly and prevents chaos. It refines our thinking. Certain qualities that are nurtured by Mathematics are power of reasoning, creativity, abstract or spatial thinking, critical thinking, problem solving ability and even communication skills.

I am immensely pleased to bring before you 2020-21 edition of 'Quester' in which students have shown their creativity and imagination. In spite of the Covid-19 pandemic, our pupils have shown a lot enthusiasm and zeal not only for online learning but also for co-curricular activities.

I am grateful to the Editorial team for working with dedication and devotion to bring out this amazing magazine

With best wishes to one and all.

Editorial Board

Jucy Choudhury Roy

Editor

Despite the austerities imposed by Covid-19 pandemic , our beloved students were as active as we are. We saw a bunch load of co-curricular activities emerging is them. Apart from that they were meticulous in their online classes as well. With this pride, I take the honour of presenting the e-edition of our magazine on Mathematics QUESTER 2020-21.

Mathematics the science of Numbers, Quantities or Shapes, is extremely fun-filled, exciting and enjoyable subject. Mathematics makes our life orderly and prevents chaos. Certain qualities that are nurtured by Mathematics are power of reasoning creativity, abstract or spatial thinking and even effective communication skills.

In this situation when our depsites are learning from home, they look out some time to contribute to this magazine. I would like to thank Madam Principal and our HOD Mr. Sanjay Mazumdar for constantly guiding us in bringing out this e-magazine exclusively for Mathematics. I would also like to thank my colleagues and the entire department of Mathematics.

So, here we are wishing all the luck to the future contributors of the society who, I am sure will be able to shape the world in such a way so that we don't see another challenging time like we are facing right now. May you all be an epitome in any field you choose

Happy Reading.
Thank You.

Results

MATHEMATICS TOPPER IN AISSCE 2020 (12TH)

Name of the Student	Marks Obtained
Radhika Garodia	100

MATHEMATICS TOPPER IN AISSE 2020 (10TH)

Name of the Student	Marks Obtained
Marks Obtained	100
Alangkrita Nath	100
Didikshya Kakoty	100
Digangana Patgiri	100
Moonli Deuri	100
Rinisha Barman	100
Nishtha Sethiya	100
Sanya Bansal	100
Yuvika Agarwal	100
Krishti Kashyap	100
Bhaskar J. Barman	100
Bibhavdeep Talukdar	100
Bhargav Chetia	100
Rishish Jain	100

Fact File

Shakuntala Devi

The Human Calculator

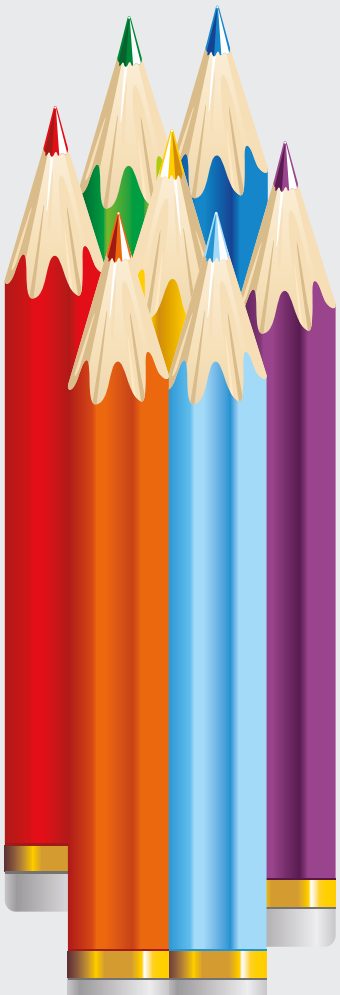
1929-2013

Shakuntala Devi was born in a humble family in Bengaluru on 4th November, 1939. Her father performed magic tricks in school and college. Once when she was playing cards,her father found out that she was able to remember every card. He was amazed because she was only three years old at that time. By the age of six,she started showing her calculating skills. She even showed her skills to the learned teachers at a university who were amazed to see her performance. At that time,some people doubted her ability and spoke against her but she did not lose heart. Rather, she was recognised as a child prodigy. She could multiply numbers within seconds. She demonstrated her skills at several places in India and abroad. She once calculated correctly a 13 digit number* 13digit number in 28 seconds before a group of people who had gathered in a college in London to see her skill. This amazing incident gave her a place in the Guinness Book of World Records. She stood out among her contemporaries for her brilliance in mathematics. The people started to call her " Human Computer". She breathed her last on 21st April 2013. She has become a role model for all the girls who hail from humble families.

Collected by

Arnav Gupta
Class VI, Sec. G

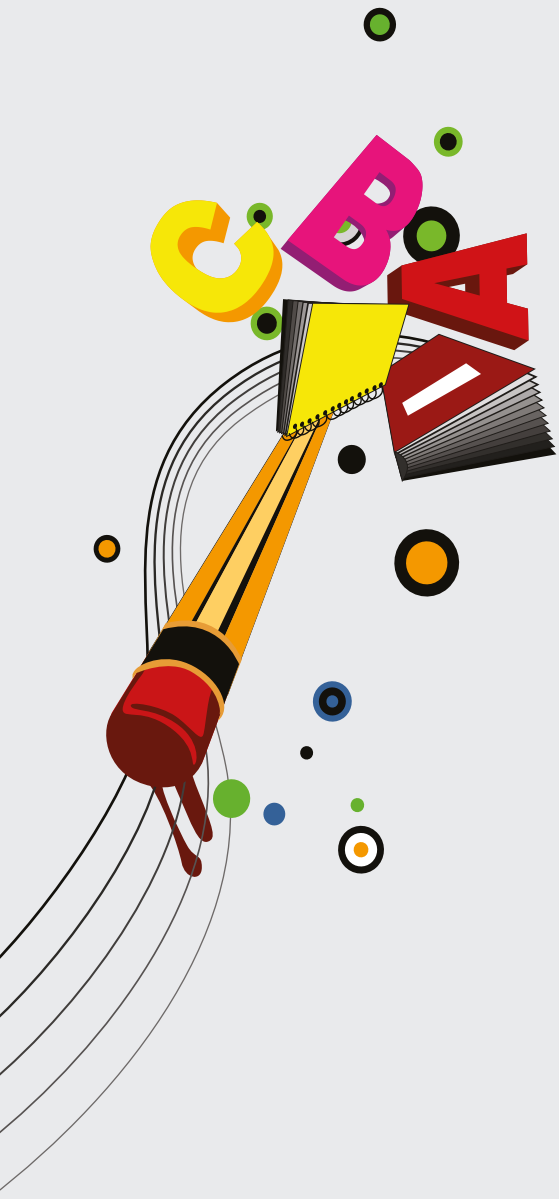
A History of Banned Numbers



They say 'The pen is mightier than a sword' is a saying that many people have agreed upon. From outlawed religious tracks and revolutionary manifestos, censored and burnt books, we know the potential power of words to overturn the social order. But as strange as it may seem, some numbers have also been considered dangerous enough to ban. Our distant ancestors long counted objects simply using tally marks. But as they developed agriculture and began living together in larger groups, this was no longer enough. As numbers grew more complex, people began not just using them, but thinking about what they are and how they work. And by 600 B.C.E in Ancient Greece, the study of numbers was well-developed. The mathematician Pythagoras and his school of followers found numerical patterns in shapes, music, and the stars. For them, mathematics had the deepest secrets of the universe. But one Pythagorean named Hipparchus discovered something disturbing. Some quantities, like the diagonal of a square with sides of length one couldn't be expressed by any combination of whole numbers or fractions no matter how small. These numbers which we call as the irrational numbers were perceived as a threat to the Pythagorean's notion of a perfect universe. They imagined a reality that could be described with rational, numerical patterns. Historicals write that Hipparchus was exiled for publicizing his findings, while legends claim that he was drowned as punishment from the gods. While irrational numbers upset philosophers, later mathematical inventions would drag attention from political and religious authorities as well. In the middle ages, while Europe was still using Roman numerals, other cultures had developed positional systems that included a symbol for zero.

When Arab travellers brought this system to the bustling maritime cities of Italy, its advantages for merchants and bankers was clear. But the authorities were more wary. Hindu – Arabic numerals were considered easier to forge or alter, especially since they were less familiar to customers than to merchants. And the concept of zero opened the door to negative numbers and the recording of debt, at a time when moneylending was regarded with suspicion.

A History of Banned Numbers



In the 13th century, Florence banned the use of Hindu-Arabic numerals for record keeping. And though they soon proved too useful to ignore, controversies over zero and negative numbers continued for a long time. Negative numbers were dismissed as absurd in the 19th century. And prominent mathematicians like Gerolamo Cardano, avoided using zero, even though it would have made it much easier to find solutions to cubic and the quartic equations.

Even today, it is illegal to use some numbers for different reasons. Some are banned because of what they represent. For example government has banned the display of numbers that have symbolic meaning, such as the date of a revolution or connections to oppositional political figures or parties. Other numbers are potentially illegal because of the information they carry. Any information, whether text, image, video, or executable programs can be translated into a string of numbers. But this means that protected information, whether copyrights, proprietary materials, or stale secrets can also be represented as numbers, so possessing or publishing these numbers may be treated as a criminal offence. These ideas gathered in 2001, when code that could be used to decrypt DVDs was widely shared and distributed in the form of a large prime number. The idea of illegal numbers may sound absurd, but like words, written numbers are a way of expressing concepts and information.

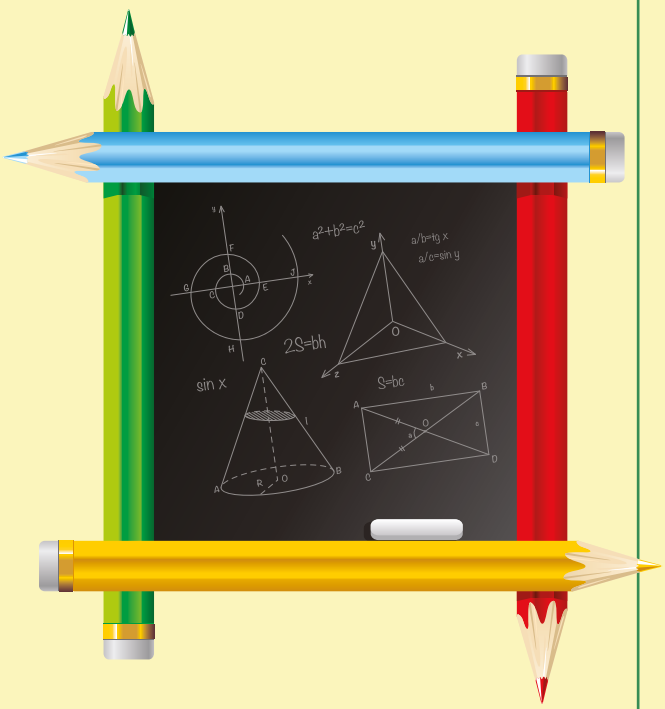
In a world where calculators and algorithms shape more and more of our lives the mathematician's pencil grows stronger by the day.

"The essence of mathematics lies precisely in its freedom"

-Georg Cantor

By
Ark Sanvi
Class: X, Sec.: K

Mathematics 'The Queen of Science'



The German mathematician Carl Friedrich Gauss referred mathematics as "the Queen of the Sciences". The word **'Mathematics'** comes from the Greek word 'mathema' meaning "science, knowledge or learning'

Mathematics is essential in many fields, including natural science, engineering, medicine, finance, and the social sciences. Applied mathematics has led to entirely new mathematical disciplines, such as statistics and game theory.

Mathematics has no generally accepted definition. Aristotle defined mathematics as 'the science of quantity' and this definition prevailed until the 18th century.

A great many professional mathematicians take no interest in a definition of mathematics or consider it undefinable. There is not even consensus on whether mathematics is an art or a science. Some just say, "Mathematics is what mathematicians do."

Mathematics arises from many different kinds of problems. At first these were found in commerce, land measurement, architecture and later astronomy. Arguably the most prestigious award in mathematics is the Fields Medal, established in 1936 and awarded every four years (except around World War II) to as many as four individuals. The Fields Medal is often considered a mathematical equivalent to the Nobel Prize.

Written and Prepared By
Aarna Mahanta
Class: VI, Sec.: A

Amazing Facts & Tricks on Maths

Words such as formula, equation and calculation sounds boring for those who hate Maths as a subject, whereas it is fun for those who have keen interest towards solving equations / problems.
October 14th is celebrated as World Maths Day. Let us know some interesting and amazing facts about Mathematics.

- What comes after a million, billion and trillion? A quadrillion, quintillion, sextillion, septillion, octillion, nonillion, decillion and undecillion.
- Plus (+) and Minus (-) sign symbols were used as early as 1489 A.D.
- Among all shapes with the same perimeter a circle has the largest area.
- Among all shapes with the same area circle has the shortest perimeter.
- From 0 to 1,000, the letter "A" only appears in 1,000 ("one thousand".)
- Have u heard about Palindrome number? It is the number that reads the same backward and forward, For example- 12421.

Now let's take a look in some of amazing tricks that will blow your mind.

- If you multiply 6 by an even number, the answer will end with the same digit. The number in the ten's place will be half of the number in the one's place .Example: 6 x 4 = 24.
- To remember the first seven digits of pi, count the number of letters in each word of the sentence: "How I wish I could calculate pi."
  This becomes 3.141592.
- To easily multiply two double-digit numbers, use their distance from 100 to simplify the math:Subtract each number from 100.

A. Add these values together.

B. 100 minus this number is the first part of the answer.

C. Multiply the digits from Step 1 to get the second part of the answer By Ruchita Saha-XC.

Mathematics

The abstract science of number, quantity, and space, either as abstract concepts (pure mathematics), or as applied to other disciplines such as physics and engineering (applied mathematics).

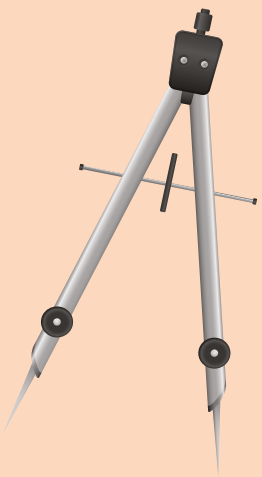
Origin:

Mathematics is the study of numbers, shapes and patterns. The word comes from the Greek word (máthema), meaning "science, knowledge, or learning", and is sometimes shortened to maths.

History:

One of the earliest known mathematician was Thales of Miletus (c. 624–c. 546 BC); he has been hailed as the first true mathematician and the first known individual to whom a mathematical discovery has been attributed.

Zero and its operation are first defined by the Hindu astronomer and mathematician Brahmagupta in 628," He developed a symbol for zero.



One saying is that astronomy and astrology were the mother of mathematics. In other words, some of the most advanced mathematics in the ancient world was done for this purpose. The Egyptian Pyramids, Stonehenge, and other ancient works are shown to have astronomical and mathematical origins.. Four thousand years ago, the Babylonians invented multiplication.

The ancient Babylonians were probably the first culture to create multiplication tables, more than 4,000 years ago. They did their mathematics on clay tablets, some of which have survived until today.

Many would agree that the first famous woman mathematician recorded by history was the Greek philosopher, astronomer, and mathematician Hypatia. Hypatia lived during turbulent times in Greek history and she may be remembered for her violent death as much as for her mathematical work.

Greek mathematician Archimedes is widely considered by many to be the "father of mathematics." He is regarded as one of the leading scientists in classical antiquity and is credited with designing numerous innovative machines, including the screw pump and siege engines.

World famous mathematicians:

Some brilliant mathematicians and who had an impact on the modern world are listed below:

- Isaac Newton .Newton is considered by many to be the greatest scientist of all time.
- Carl Gauss . Gauss may have been the greatest mathematician ever.
- John von Neumann .Von Neumann worked at Princeton with Albert Einstein.
- Alan Turing
- Benoit Mandelbrot

Mathematics

Branches of Mathematics:

Some of branches of mathematics that usually students studies are given below:

- Algebra
- Calculus
- Geometry and topology
- Combinatory
- Logic
- Number Theory
- Dynamical Systems & Differential Equations
- Mathematical Physics

Reason for studying mathematics:
Mathematics helps us think analytically and have better reasoning abilities. Analytical thinking refers to the ability to think critically about the world around us. ... Analytical and reasoning skills are important because they help us solve problems and look for solutions.

Application of Mathematics:

Mathematics arises from many different kinds of problems. At first these were found in commerce, surface measurements, architecture and later science of celestial bodies. Today, all sciences suggest problems studied by mathematicians, and many problems arise within mathematics itself. For example, physicist Richard Faymen invented formulation of integral path of mechanics of quantum science busing a combination of mathematical reasoning and physical insight, and today's theory of strings, a still-developing scientific theory which attempts to unify the elemental natural forces continues to inspire new mathematics.

The study of space originates with Geometry-in particular, Euclidean geometry, which combines space and numbers, and encompasses the well-known Pythagoras theory. Trigonometry is the branch of mathematics that deals with relationships between the sides and the angles of triangles and with the trigonometric functions

Today starting with trade calculations mathematics found use in all walks of life . Some used are given below:

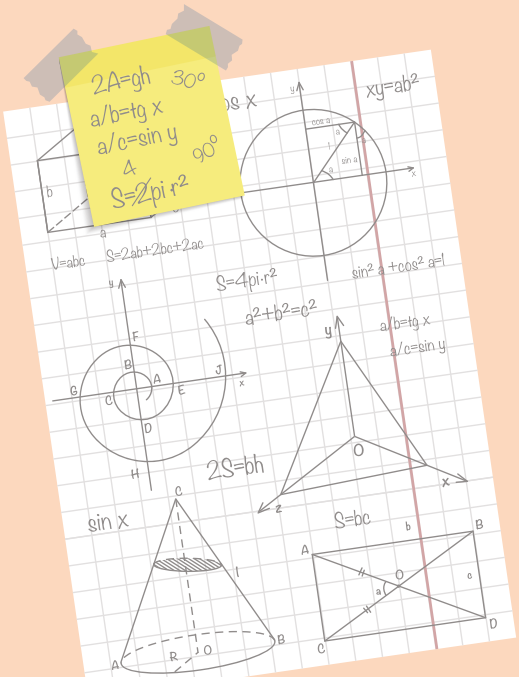
- Forecasting population growth
- Analysis of share prices.
- Business accounting
- Engineering project design and calculation
- Aerospace engineering
- Rocket technology
- Space technology
- Weather forecasting
- Data analysis
- Statistics
- Computing
- Quantum mechanics

Mathematics

Awards in Mathematics:

Arguably the most prestigious award in mathematics is the FIELDS MEDAL established in 1936 and awarded every four years (except around World War II) to as many as four individuals. The Fields Medal is often considered a mathematical equivalent to the Nobel Prize.

The WOLF PRIZE IN MATHEMATICS, instituted in 1978, recognizes lifetime achievement, and another major international award, Abel prize was instituted in 2003. The Chern medal was introduced in 2010 to recognize lifetime achievement. These accolades are awarded in recognition of a particular body of work, which may be innovational, or provide a solution to an outstanding problem in an established field.



Growth of mathematics in twentieth century:

Topology in all its many ramifications may have been the greatest growth area in 20th-century mathematics. It includes point set topology, set theoretic topology, algebraic topology and differential topology. In particular, instances of modern-day topology are metrizability theory , axiomatic set theory, homotopy theory, and Morse theory. Topology also includes the now solved poincare conjecture, and the still unsolved areas of the Hodge conjecture. Other results in geometry and topology, including the four colour theorem and Keplar conjectures, have been proven only with the help of computers.

Conclusion:

Mathematics since it's days of inception has come a long way changing the world ,changing the way we live. Lot of things that sounded obscure in yesteryears now became crystal clear . Now a school student knows what is the distance of moon from earth , how long does it takes for sun light to reach earth. How much is the gross domestic product of India, what will be India's population ten years from today . Thus mathematics has found its way in all walks of life . In future technologies mathematics will change our life beyond expectations. But what ever be the advancement of science and technology, it will be always founded on the discipline of mathematics.

Siddhartha Shome
Class: VII, Sec.: I

Mr. Five & Miss Two

Five asked Two
"Who are you?"

Said by Two
"I will give you a clue,
By adding with you, we will make
Seven,
You and me, let's have a tour to
heaven."

Five smiled and said "I got your clue,
Now I know who are you.
If I subtract you from me,
We will find our friend Three"

Prajakta Goswami
Class: IV, Sec.: G

Mathematical Riddles

RIDDLE 01: Carving up the camels?

On his deathbed the elderly Arab gathered his three sons around him and expressed his wish that his 23 prized camels should be shared among them. Ahab the eldest was to have half of the camels, Aziz the second son was to have a third and Abdul the youngest was to have an eighth share. Initially pleased with their lot, the sons soon realized they had a problem for they couldn't see how they could divide 23 camels into their allotted shares without slaughtering some of them. In their anguish they turned to their late father's revered brother for advise. After sleeping on the problem he lent them one of his own prize camels thus making a total of 24 and suggested they shared them out. Ahab took 12, his half share, Aziz then took 8, his third, and Abdul then took 3, his eighth share, and then returned his uncles camel to him with much thanks. Where is the catch?

SOLUTION:

Perhaps deathbeds aren't the best place for mental arithmetic! The shares the elderly Arab allocated to his sons do not add up to 1.

$$1/2 + 1/3 + 1/8 = 23/24$$

By uncles solution in fact they all gained.

Ahab receives $12/23 > 1/2$

Aziz receives $8/23 > 1/3$

Abdul receives $3/24 > 1/8$

This is a very old puzzle but well worth repeating.

RIDDLE 02: Who came in second?

Tom, Harry and Sam engage in some track and field events in which points are awarded for 1st, 2nd and 3rd. At the end of the events, Tom has 22 points, while Sam and Harry both have 9 points. No one else had any points. Sam was 1st in the javelin throw. Who came 2nd in the 100 meters?

SOLUTION:

At first it appears that there is not enough data. But there are 40 points awarded in all, and making the reasonable assumptions that

i. Each event is allocated the same number of points

ii. A different positive number of points is allocated to each of the first three positions

Then the following scoring system needs to be considered

5 events scoring (4, 3, 1) or (5, 2, 1)

4 events scoring (5, 3, 2) or (6, 3, 1) or (7, 2, 1)

Only one of these will satisfy the remaining conditions and leads to

	javelin	Event 2	Event 3	Event 4	Event 5	
Tom	2	5	5	5	5	22
Sam	5	1	1	1	1	9
Harry	1	2	2	2	2	9

So Harry was second in all but the javelin.

Mathematical Riddles

RIDDLE 03:
The old girls reunion

At their schools annual reunion five friends shared a table for dinner. Each friend ordered something to drink, a meat coarse and a desert. Brenda and Mrs. Burns had martinis while Betty and Mrs. Brown ordered sherry. Ms Baker had a fruit juice. Brenda and Miss Broad ordered steak. Beryl and Ms Baker had roast beef. For desert Beryl and Miss Black ate gateau, while Barbara and Ms Baker had ice cream. The other friend had a fruit salad. No two friends sitting next to each other were served two things the same. Who had duck and what did Bridget eat?

SOLUTION:

Mrs. Barbara Brown had duck. Ms Bridget Baker had roast beef and an ice cream.
This is not such a difficult problem to solve as it may first appear, if tackled systematically using a table.

	Miss Brenda Black	Mrs. Barbara Brown	Mrs. Beryl Burns	Miss Betty Broad	Ms Bridget Baker
Drink	Martini	Sherry	Martini	Sherry	Fruit juice
Meat	Steak	Duck	Roast beef	Steak	Roast beef
Desert	Gateau	Ice cream	Gateau	Fruit salad	Ice cream

RIDDLE 04: Do you know your birthday?

Perhaps you know on which day of the week you were born. You could hardly be expected to remember the day itself, and your parents may well have forgotten, although you, and they, will know your date of birth. So are you a Wednesday's child, full of woe, or a Monday's child fair of face, or what? If you had patience you could carefully count back the days through the year, not forgetting that every fourth year is a leap year, until you arrived at your birthday. That could take a long time. But don't despair; there is a much easier way as follows:

1. Let Y be the year you were born.
2. Let D be the day of the year you were born.
3. Calculate $X = (Y - 1)/4$ and ignore the remainder.
4. Find $S = Y + D + X$
5. Divide S by 7 and note the remainder.

The day on which you were born can now be deduced by using the table below to see which day corresponds to the remainder.

Remainder	0	1	2	3	4	5	6
Birthday	Fri	Sat	Sun	Mon	Tue	Wed	Thurs

Mathematical Riddles

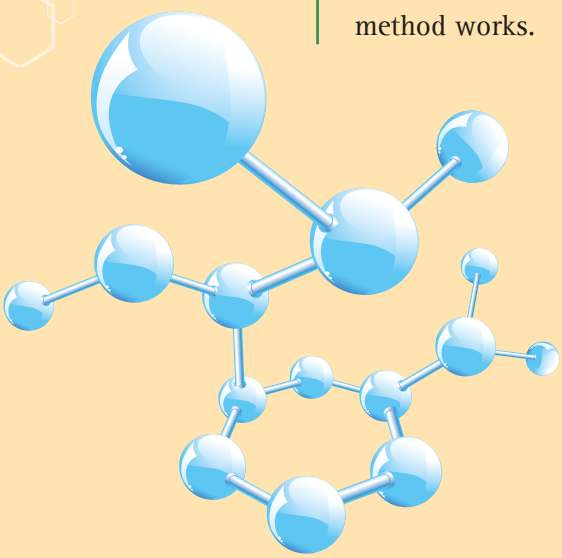
The following worked example is based on my grandma's birthday and should make the method clear.
She was born on the 6th day of June in 1960.

1. Y = 1960
2.

January	31 days	
February	29 days	as 1960 is a leap year
March	31 days	
April	30 days	
May	31 days	
June	6 days	
D =	158	

3. X = (1960-1)/4=1959/4=489
   ignoring the remainder
4. S = 1960 + 158 + 489 = 2607
5. 2607 ÷ 7 gives 372 remainder 3

Using the table, a remainder of 3 would indicate that my grandma was born on a Monday. When you have found the days on which you and your family and friends were born see if you can see why the method works.



Reina Dutta Patwari
Class: VIII, Sec.: C

Mathematics

Mathematics is full of fun
With so much to learn
Profits are added,
While losses are subtracted,
Degrees are multiplied,
And percentage is divided
Geometry is full of mystery
Algebra has a big history,
Integers as different as brothers,

Lines are parallel,
Angles are similar
Maths is necessary in life
Without it, it is difficult to survive

Ankita Kalita
Class: VIII, Sec.: D

Less time taking Tricks

1. Multiplication of a number with 5:-
For even numbers,
2464×5=?

Step 1:
Divide the number by 2. **2464/2=1232**

Step 2:
put a'0' after the ones place. **12320**

Therefore, 2464×5= 12320

For odd numbers,
3775×5=?

Step 1:
Subtract 1 from the number to be multiplied.
3775-1=3774

Step 2:
Divide the result by 2.
3774÷2=1887

Step 3:
Put a '5' after the ones place. **18875**

Therefore, 3775×5=18875

2. Dividing a large number by 5:-
2128 ÷ 5 = ?

Step 1:
Multiply the number by 2. **2128×2=4256**

Step 2:
Put a decimal before the ones place. **425.6**
Therefore, 2128 ÷ 5 = 425.6

3. Finding the square of a 2-digit number:-
57^2 = ?

Step 1:
Consider a = 5 and b = 7 (Likewise the tens will be placed in Column I and the ones place in the Column III for any other 2-digit number), then follow the first column under the three columns I, II and III.

COLUMN I	COLUMN II	COLUMN III
a^2	2×a×b	b^2
5^2=25	2×5×7=70	7^2 49

Step 2:
Take the value of column III (b) into consideration and add the value of the tens digit to the final value of column II. Similarly, take the final value of column II into consideration and add the value of the tens place to the final value of column I.

COLUMN I	COLUMN II	COLUMN III
25+7=32	70+4=74	49

Step 3:
Take the whole value of column I, the ones place of column II and the ones place of column III into consideration as your answer.
Therefore, 572 = 3249

4. Multiplying any number with 11:-
42×11=?

Step 1: 42×11
4 + 2
=462

Chirag Shyamsukha
Class: VII, Sec.: A

The 9-Times Table Trick

We all think that Mathematics is difficult, right? But actually its not! Mathematics is fun!All we need to do is think a little and practise. We should all know how to add, subtract, multiply and divide. The times tables are very important in mathematics. If we know our multiplication tables well, we can solve any sum. I recite the times tables 2-9 everyday. I am sure you all know the tricks to remember tables. For example the 2 times table has numbers ending in 2,4,6,8,0. The 5 times table has numbers ending in 5,0,5,0 and so on. I will tell you a trick to remember the 9 times table.

First look at the 9 times table in a book and write it down.

9 x 1 = 9
9 x 2 = 18
9 x 3 = 27
9 x 4 = 36
9 x 5 = 45
9 x 6 = 54
9 x 7 = 63
9 x 8 = 72
9 x 9 = 81
9 x 10 = 90

Now, look carefully. All the numbers in the ones place is backward counting from 9 to 0.All the numbers in the tens place is forward counting from 0 to 9.

So, to remember the table, write down the table first without the answers. Then fill up the ones place by backward counting from 9 to 0. Write one numbers one below the other.

Next, fill up the tens place by counting from 0 to 9. Write these numbers to the left of the numbers you had written by backward counting. Once you have finished you will get the complete nine times table. Practice writing like this every day and in a few days you will be able to remember the nine times table!

Fun Fact:

The word ODD has 3 letters and 3 is an odd number!

The word EVEN has 4 letters and 4 is an even number!

Submitted by:
Divyansh Gokhale
Class: III, Sec.: H

Math Of Sunflowers:

Sunflowers are beautiful, and iconic for the way their giant yellow heads stand off against a bold blue sky. However, have you ever stopped to look at the pattern of the seeds held within the centre of these special flowers?

When we observe the head of Sunflowers, we notice two series of curve, one winding in one sense and the other in another. We observe that the number of spirals in any one direction is one of 13, 21, 34, 55, 89, etc. This special sequence of numbers is known as Fibonacci Sequence, which is a sequence generated by adding the previous two numbers of the sequence to get the next term and it goes like 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, ...

In fact, the number of petals on any flower is usually one of these and there are many instances of this sequence being repeated in nature.

There are many more instances of Fibonacci Sequence appearing in nature like in the arrangement of leaves, in pine cones and even in animals. So next time let's keep an eye out for this sequence of numbers!

Mantasha Rashid
Class: VII, Sec.: C

How I perceive mathematics

Is Mathematics only numbers? Well, my first thoughts were to surf the internet to get a good definition of the term. But the internet is an open book and contains various definitions of mathematics, some so long that I forget midway where I started first. So for once, I decided not to search any more. I wanted to write my own perception of mathematics. How I have seen mathematics from childhood till now.

I tried to close my eyes and think of a world without numbers. It seemed bizarre and chaotic. I would never know when its morning, the shape of the sun, the time to get up, how much to eat, when and how much to study and the list is endless. So to sum up, I felt that it would all be an assumption and nothing would be concrete and systematic without numbers, shape, measurements and calculations in our life. I would not be able to keep track of my age and neither I would be able to compare anything.

I remember my early days when mother took matchsticks to teach me one, two, three counting. Sometimes she used to use flashcards. It was play and learning. Then came writing the numbers, their names and then the numbers would just increase with each class that I passed. I would ask my mother, “Ma, what is the largest number in the world?” Mother would show me the sky and say, “The day you can count all the stars in the sky, you would get the answer. For that you need time and to know a lot of numbers.” Today, I know that the answer is infinity. The elders know of cool ways to avoid tricky questions.

I have always loved mathematics more than other subjects. I found it was way easier and took lesser time than the rest of my subjects. Mother made it a daily routine to set aside a fixed time to practice mathematics. She said that mathematics is all about practice. So before exams I never got worried about this subject unlike others where I had to memorize endlessly even till the last hour before exams. Though various types of mathematics like general math, algebra, geometry came up in higher classes, yet mathematics was essentially all about formulas that centered onbasic principles of addition, subtraction, multiplication and division. All other subjects were never formulas that could be worked out with brain. We have to learn and never miss a sentence in other subjects.We also have to learn by heart the poems and answers and in never heard of anything called concept in literature.

A student who understands the basic concepts of mathematics can apply them in doing any kind of difficult sums and will then be able to appreciate the joy in mathematics. Every student should pay attention to this and love mathematics. All the technological improvements and space expeditions are based on mathematical calculations and loving mathematics will enable us to make a lot of scientific discoveries in the future. Now, isn’t that interesting and promising!!

Written By:

Anubhav Malakar

Class: VII, Sec.: C

INDIA: the origin of Mathematics

Khalifa Al Mansur an Arabian ruler had translated the Indian book on mathematics and astronomy into Arabic language. The famous mathematician, Dark J. Sterik had clearly mentioned in his book "History of Mathematics" that the knowledge that Europe received from the Arab World has its origin in India.

Many centuries before Christ Mathematics was very important to the Indians. Algebra, geometry, trigonometry, arithmetic were developed in India way back but unfortunately got foreign names assigned which used in India and in the world too.

Mathematical Numbers
The Mathematical Numbers used by the whole world was given by India. The signs are upgraded. They were earlier termed as Arabic Numerals. "Hindsa" the Arabic name used by the arab also indicates the origin of it in India.

Zero
If we keep 0 on one side and all other discoveries on other side of a weighing machine side with 0 will be heavier. 0 in vedas is so old that it id hard to give the exact time of origin. Earlier it was used as a point modified into 0. It is widely believed that Aryabhatta discovered 0.

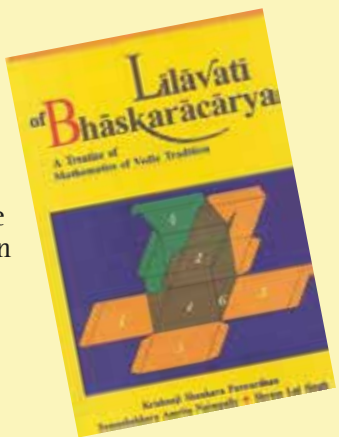
Geometry
Since ages geometry was associated with ancient Indian traditions of sacrifices. It is now accepted all over the world that algebra, astrology and geometry were first used by Indians.

Area of a Triangle
As early as 4th century A.D Aryabhatta mentioned the famous formula to calculate the triangle. In "Aryabhattiyam" he has given the formula of root cube in detail. Later became famous as Arabian Mathematics. Differential calculus credited to Newton of 16th century had already been developed in India 500 years before him.

Trigonometry
Trigonometry was also discovered in India. "and "Coti japa" are sine and co sine of modern trigono metry. Aryabhatta has given a sine scale for angles between 0 degree to 90 degrees. Ancient Indians referred it as Astronomy.

Pie
Bhaskaracharya in "Lilavati" had given importance to pie. Value of it was 3.1416 almost similar to the value given by modern mathematics 3.1415926. Aryabhatta and Srinivas Ramanujam are also the important names associated with pie.

Pythagorus Theorem
Pythagorus theorem is nothing but the "Bodhyan Sutra" of the vedas. Unfortunately not only the world but India also gives the credit to Greek Mathematician Pythagorus.



Quizzing Mathematics!

1. If you remove one letter from me, I become even...who am i??

2. How can you make 1000 by using 8 exactly eight times?

3. I am a number with a couple of friends, quarter a dozen and you will find me again. Guess which number am i?

4. You can read it both ways, i wear: One way it's a number, reversed a snare.

5. How many nines are there between 1 and 100?

6. What is half of two plus two?

7. If 9999= 4 , 8888= 8, 1816= 6, 1212=0, then 1919 = ? what

8. You are given 3 positive numbers. you can add them and multiply them together. The result you get will be the same. Which are the numbers?

9. It takes 12 men 12 hours to complete a wall. Then how long will it take 6 men to complete the same wall?

10. Mary has 7 daughters and each of them has one brother. How many kids does mary have?

ANSWERS....

1. 7
2. 888+88+8+8+8
3. 3
4. 10
5. 20
6. 3
7. 2
8. 1, 2 and 3
9. None.
10. 8 Kids

by
Kashvi Kothari
Class: VII, Sec.: H

Candlelight Math

In the year 1789, the year the French Revolution began, a young girl in her early teens had her eyes focused on the thick pages of the book in front of her, reading every word with an interest, powerful enough to make the world proud of her one day.

For now, she was sitting on a table, in her father's extensive library, reading Volume 1 of Jean-Étienne Montucla's History of Mathematics, completely intrigued. Every page of that book had held her in possession, especially the story of Archimedes, the towering genius of antiquity. She was pretty fascinated reading about his life, and particularly, his death.

The story of this certain death which amazed her was that once the said-about-to-be-dead-then was focused on drawing a diagram in mechanics, when a Roman soldier came up and began to drag him away to take him prisoner. But he, being wholly intent at the time on the diagram, and not perceiving who was tugging at him, told the man to stay away from his work. As the man continued pulling, he turned round and, realizing that he was a Roman, he cried for his weapon, but the Roman, scared, straightway slew him, tragic.

Moral: It doesn't matter how smart you think you are or how deep your thoughts are... it's a good idea to do what the man with the sword is telling you to.

Basically, the main thought that came to her mind was: what could be so engaging, so exciting, that a person would ignore their own impending death?

Math, of course.

The said girl, Sophie Germain, or, according to her pen name, for special papers, Monsieur Leblanc (you'll understand later), was born on the 1st of April, 1776, in Rue Saint-Denis, Paris, France. She had two siblings: an elder sister, Marie-Madeleine (named after their mother) and a younger sister, Angélique-Ambroise. Her parents were Marie-Madeleine G. and Ambroise-Francois G.

Germain was thirteen years old when the Bastille fell. Paris was an unstable and dangerous city. During the next ten years of the French revolutionary violence, Sophie Germain spent much of her time confined to her house (rings a bell?), reading in her father's library. Sophie found the depth and variety of her father's library, a great help during the long days of solitude.

Her family agreed with the early and toxic mindset, then popular English notion of the time that 'brainwork' was not healthy, and even dangerous - for girls. They began to forbid Sophie from studying mathematics. As it always happens (movies, movies), these incidents left a strong impact on young Sophie's mind. She became even more determined to educate herself and decided, unknowingly herself, to go beyond the mentioned mindset of that time - to become an educated woman of strong will, who would leave the world speechless with her theories and work.

So, night after night, she crawled out of bed and studied quietly, after everyone else was hopefully drowned in slumber. Naturally, her parents found this out and took the lamps from her room, and even her clothes, so as to make sure there would be no heat in her room. But Germain smuggled candles into her room and continued her studies. When her parents found her one morning, sound asleep at her desk with her pen in a frozen inkwell, bundled in a quilt, they relented and allowed her studies. Self-tutored, Sophie spent the Reign of Terror, that unsettled time in France, teaching herself differential calculus.

Candlelight Math

When she turned 18, the Ecole Polytechnique, a technical academy established to train mathematicians and scientists, was founded. Sophie wished to study there, but was denied admittance because of another mindset- that girls should not receive an education, because of their gender. But this did not stop her from obtaining the lecture notes from her friends, according to a new system of education back then, so her learning continued.
Germain was particularly interested in the lectures by one professor, Joseph-Louis Lagrange, a notable mathematician of that time. So, caught by interest for a chance to write, when a paper was assigned, she submitted one, under the pen name of Monsieur LeBlanc, also according to the new education system. Upon discovering the author was a woman, Lagrange was astonished but, although bound by the prejudices of the time, recognized the abilities of Germain and began to help and encourage her.

Later on, in 1815, after the elasticity contest, the Academy offered a prize for a proof of Fermat's Last Theorem. It reawakened Germain's interest in number theory, and she wrote to Carl Friedrich Gauss, under the same pen name, Monsieur Leblanc, concerned that Gauss may also be prejudiced against women. But, as with Lagrange before him, Gauss found her comments valuable and initiated correspondence. When Gauss discovered her true identity, he too, was open-minded about women scholars. Although the two never met, Gauss helped to inform his colleagues of Sophie's talent and accomplishments and were friends.

In 1816 Germain submitted her paper which won the grand prize from the French Academy for her work on the law of vibrating elastic surfaces. This theory helped to explain and predict the unusual patterns formed by sand or powder on elastic surfaces when they were vibrated. Such studies in elasticity made the construction of the Eiffel Tower possible. Furthermore, she proved Fermat's Last Theorem. It was- If p is an odd prime and $q = 2p + 1$ is also prime, then p must divide one of x, y, or z, and therefore Case 1 of Fermat's Last Theorem is true for p. A prime p satisfying that $2p + 1$ is also prime is called a Sophie Germain prime (relax dear reader, I didn't ask you to understand it).

Although Germain never worked as a mathematician, she studied independently and wrote about the subject. She is best known for her work on the above mentioned Fermat's Last Theorem, considered at the time to be one of the most challenging mathematical puzzles. She was a revolutionary. She battled against the social prejudices of the era and a lack of formal training in order to become a celebrated mathematician.

Germain also became the first woman, at the age of 40 to win a prize from the Paris Academy of Sciences, on the 8th of January, 1816 for writing about elasticity theory. Today that prize is known as the Sophie Germain Prize.
Sophie Germain died tragically on 27 June 1831, Paris, France at the age of 55. She had been in pain for two years, suffering from breast cancer. She died shortly before she was to receive an honorary doctor's degree from the University of Gottingen. There she was also to have finally met Gauss, who had recommended that the degree be granted to her.

Sharmistha Bannerjee
Class: VIII, Sec.: G

Riddles

MATHS TEACHER:

1. How can you distribute 4 mangoes among 6 people equally...????
   Students: BY MAKING JUICE

2. Who is the king of the 'pencil box'?
   Ans: THE RULER.

3. Bob had 38 candy bars he ate 30. What does he have now??
   Ans: DIABETES.

4. Where do fish keep their money??
   Ans: IN THE RIVER BANK.

5. Who invented round table??
   Ans: SIR- CUMFERENCE.

Chirag Shyamsukha
Class: VII, Sec.: J

Love it ! Hate it! You may never escape it

Mathematics- a word you may dread the most or you may love the most. It's always the most extreme emotion we associate with this particular subject from a very early age, without actually knowing or realizing it is Maths which is deeply associated to every small single activities of our lives. From the moment we wake up, the clock we run around with, the many savings and expenses we make, the days we count, the balanced food we eat.. every small part has a detailed calculation associated with it! Isn't it wonderful to know how our lives from the very beginning to end is governed by so many numbers?

You are in a shop, buying basic food items, you need your addition, subtraction, multiplication or division. You are in a hospital for your health check up, your BMI (Body Mass Index) is checked first. During the process of constructing a house , you may have all the money but you also need the basic geometry to make it a beauty. When you are cooking a meal, the measurements of your salt and flour and the specifications of temperature plays the most crucial role in all. Thus, Mathematics might be a headache for some, but with a little practice and patience, you'll soon realize why mathematics and life are so much interconnected.

With the knowledge of just the basic Maths in life we can enrich many aspects of our daily activities. Maths develops our reasoning abilities , our critical and analytical processing. Analytical thinking refers to the ability of thinking logically about the world around us. A person with such abilities finds it easy to analysis a situation, take important measures to improve or solve it with his/her many strategies and I truly believe that a person is thoroughly polished by Mathematics to face such situations with more endurance.

You may choose any career, any stream but somehow or someway you will always find Maths in your path helping you in places you never thought you would need. Learning and appreciating math can help you appreciate things that you would not otherwise notice about the world. In reality ,Mathematics is everywhere. The more readily you accept its significance, more you can associate with it without fearing it.

Often children fear Maths because of many numbers and calculations they are enforced to deal with from an early age. But rather than just forcing them to calculate they must be shown how intriguingly webbed Maths is around us. How deeply we are associated with it! Even the nature around us follows the many laws and rules of Mathematics; from the beautiful patterns of flower petals to the pattern of a honeycomb, the breeding of rabbits to the spinning of spider webs; everything has Maths. The more they will relate to the positive aspects and association of this topic, the impact of the negative vibe and fear of Maths is most likely to go away.

The great Pythagoras had well said, "There is geometry in the humming of the strings, there is music in the spacing of the sphere." Everything that is around us has mathematics in it and in most definitely, you may love it or hate it but you may never be able to escape it.

Rumi Sharma

Mathematics: The Origin of Revolution

Mathematics can be regarded as the most logical and universal language which is always used mostly in all subjects. In higher classes, mathematics becomes the most important of all. Basic mathematics viz. addition, subtraction, multiplication and division can be referred as the most valuable treasure of our basic learning as it helps us in every part of our education and further professional life . In fact these are the most important elements of mathematics CONCEPT BUILDING. If your concept is up to the mark, mathematics becomes the most interesting and worth learning subject of all. The memory ability is another most important step towards learning correct mathematics. Formulas should be correctly remembered or else it will take towards the downfall of learning mathematics. As a whole mathematics is the origin of revolution in the world of education as it has taken the world to the place where we are trying to go to the next level of revolution.

Sreeparna Roy
Class: V, Sec.: H

P.C. Mahalanobis - Father Of Indian Statistics

Prasanta Chandra Mahalanobis was an Indian scientist and statistician. He is best remembered for the Mahalanobis distance, a statistical measure, and also for being one of the members of the Planning Commission of free India. He made pioneering studies in anthropometry in India. He founded the Indian Statistical Institute and contributed to the design of large-scale sample surveys. For his important contributions, Mahalanobis is rightly considered as the father of modern statistics in India.

Mahalanobis came from an affluent Bengali family who lived in Bikrampur (now in Bangladesh). He received his early schooling at the Brahmo Boys School in erstwhile Calcutta, graduating in 1908. He joined the Presidency College, then affiliated to the University of Calcutta, where he was taught by teachers who included Jagadish Chandra Bose and Prafulla Chandra Ray. He left for England in 1913 to join the University of London.

Mahalanobis distance is one of the most widely used statistical tools. It was first proposed by Mahalanobis in 1930 in context of his study on racial likeness. He worked on anthropometric measurements.

His most important contributions are related to large-scale sample surveys. He introduced the concept of pilot surveys and advocated the usefulness of sampling methods.

He introduced a method for estimating crop yields which involved statisticians sampling in the fields by cutting crops in a circle of diameter 4 feet.

Mahalanobis was a member of the planning commission which contributed prominently to newly independent India's five-year plans starting from the second. In the second five-year plan he emphasized industrialization. His Mahalanobis model was employed in the Second Five Year Plan, which worked towards the rapid industrialisation of India and with other colleagues at his institute, he played a key role in the development of a statistical infrastructure.

In the 1950s, Mahalanobis played a critical role in the campaign to bring India its first digital computers.

Mahalanobis died on 28 June 1972, a day before his seventy-ninth birthday. Even at this age, he was still active doing research work and discharging his duties as the Secretary and Director of the Indian Statistical Institute and as the Honorary Statistical Advisor to the Cabinet of the Government of India.

The government of India decided in 2006 to celebrate his birthday, 29 June, as National Statistical Day.

Aradhya Das
Class: VI, Sec.: B

Srinivasa Ramanujan

Indian Mathematician

Srinivasa Ramanujan, (born December 22, 1887, Erode, India-died April 26, 1920, Kumbakonam), Indian mathematician whose contributions to the theory of numbers include pioneering discoveries of the properties of the partition function.

When he was 15 years old, he obtained a copy of George Shoobridge Carr's Synopsis of Elementary Results in Pure and Applied Mathematics, 2 vol. (1880–86). This collection of thousands of theorems, many presented with only the briefest of proofs and with no material newer than 1860, aroused his genius. Having verified the results in Carr's book, Ramanujan went beyond it, developing his own theorems and ideas. In 1903 he secured a scholarship to the University of Madras but lost it the following year because he neglected all other studies in pursuit of mathematics.

Ramanujan continued his work, without employment and living in the poorest circumstances. Ramanujan, unwilling to exist on charity, obtained a clerical post with the Madras Port Trust. In 1911 Ramanujan published the first of his papers in the Journal of the Indian Mathematical Society. His genius slowly gained recognition, and in 1913 he began a correspondence with the British mathematician Godfrey H. Hardy that led to a special scholarship from the University of Madras and a grant from Trinity College, Cambridge. Overcoming his religious objections, Ramanujan traveled to England in 1914, where Hardy tutored him and collaborated with him in some research.

Ramanujan's knowledge of mathematics (most of which he had worked out for himself) was startling. Although he was almost completely unaware of modern developments in mathematics, his mastery of continued fractions was unequaled by any living mathematician. He worked out the Riemann series, the elliptic integrals, hypergeometric series, the functional equations of the zeta function, and his own theory of divergent series. On the other hand, he knew nothing of doubly periodic functions, the classical theory of quadratic forms, or Cauchy's theorem, and he had only the most nebulous idea of what constitutes a mathematical proof. Though brilliant, many of his theorems on the theory of prime numbers were wrong.

In England Ramanujan made further advances, especially in the partition of numbers (the number of ways that a positive integer can be expressed as the sum of positive integers; e.g., 4 can be expressed as 4, 3+1, 2+2, 2+1+1, and 1+1+1+1). His papers were published in English and European journals, and in 1918 he was elected to the Royal Society of London. In 1917 Ramanujan had contracted tuberculosis, but his condition improved sufficiently for him to return to India in 1919. He died the following year, generally unknown to the world at large but recognized by mathematicians as a phenomenal genius, without peer since Leonhard Euler (1707–83) and Carl Jacobi (1804–51). Ramanujan left behind three notebooks and a sheaf of pages (also called the "lost notebook") containing many unpublished results that mathematicians continued to verify long after his death.

Rifa Sanzida Zaman
Class: X, Sec.: H

The Concept Of Infinity

Infinity, the concept of something that is unlimited, endless, without bound has been a subject of great interest for mathematicians through out the centuries. The ancient Greeks expressed infinity by the word Apeiron, which means unbounded. Since the time of ancient Greeks, the nature of infinity has been the subject matter of many discussions. The issue of infinitely small numbers(infinitesimals) led to the discovery of calculus by Isaac Newton and Gottfried Wilhelm Leibniz.

THE IDEA BEHIND

During the early years , as mathematicians struggled with the foundation of calculus, it remained unclear whether infinity could be considered a number or a concept . But now, it has been agreed upon that infinity is actually a concept and not a number. It is a concept or an idea of going on forever. Infinity can be compared to that of the Universe. What is the size of Universe? No body knows. People say that the Universe is infinite, but no one knows about it. It has no destination . But , the Universe may be like the surface of a ball, that has a finite size , but no beginning or ending. That is the matter with infinity. We do not know its value , but say that it is limitless.

ANOTHER WAY OF LOOKING

Georg Cantor, a renowned German mathematician, in the late 18th century showed that there are infinite numbers of infinities of different sizes. But how? Here's an example

He made a list of all fractions or rational numbers , i.e, 1 , ½ , 1/3 , ¼ and so on, that goes on forever. He also said that all rationals can be listed and the set of rationals obviously ranges to infinity. Now lets come to the irrational numbers . Irrationals are nothing but the non repeating and non terminating decimals . If I ask you to list all the irrationals , you may probably write numbers like-
0.01234601..., 0.12356728..., 1.23456093..., 1.34289045..... and so on , so your set has all the irrationals . But I can prove you wrong by writing a number of my own like 0.00005362... that does not match with any of the above mentioned numbers. Okay then , if you include my number in your list , then also I can prove your set to be incomplete by just interchanging the digits like 0.00005632... . If you write 5 in the first decimal place, I may write 2 and if you write 2 in the first decimal place , I may write 3 or something else. In this way every time your set will be incomplete.

That is why Cantor said that the infinity of irrationals is greater than rationals . Like wise the infinity of decimals is greater than the infinity of whole numbers . If rationals are the stars in the sky , irrationals represent the darkness of the night sky. Cantor also said that if we have a set of infinite elements, then we can create an even bigger set from the given set, like-
Consider a set A={1, 2, 3, 4, 5, 6, 7, 8, 9,1 0, 11, 12, 13, 14, 15,.....}Now I can make a set having all the subsets of A, i.e, P={ {1, 2}, {2, 3}, {3, 4}, {4, 5}, {1, 2, 3}, {2, 3, 6,1 0}, {3, 27, 22, 73}, {99, 100, 101, 1, 2, 3}, {2, 7, 9, 11}..... }
Clearly P has more elements than A, so P's infinity is greater than A.

The Concept of Infinity

ANY NUMBER DIVIDED BY ZERO

Now lets come to a famous question . What is actually any thing divided by 0? Well, some say that it is infinity while some say that it is not defined. What is the correct answer? Before that lets consider an example- 1/1=1, 1/0.1=10 , 1/0.01=100, 1/0.0001=10000, 1/0.000001=1000000, 1/0.000000001=1000000000

As we decrease the value of divisor in above examples , the value of the answer increases. That means if 1/x = y , then as the value of x tends to 0 , the value of y tends to infinity. But that does not mean 1/0 = infinity , because-

If 1/0 = infinity , then it should be true that 0 x infinity = 1 . But this contradicts the fact that any number multiplied by zero gives zero. But let us suppose that 0 x infinity = 1 . Then (0 x infinity) + (0 x infinity) = 2 , then taking infinity common , this must be (0+0) x infinity = 2 , then 0 x infinity = 2 , then 1 = 2 , which is a false statement . Hence any number divided by zero is actually not defined . That is why the statements – " If 1/x = y , then as x tends to 0 , y tends to infinity" and "1/0 = infinity" are not the same . Due to these anomalies, infinity is considered a concept and not a number.

Lastly, I would like to conclude that **there is no one in this world who can understand the actual concept of infinity, just as there is no one who knows about the entire universe. There are even some unanswerable questions in mathematics, but mathematics is still a beautiful subject.**

Manas Kamal Das
Class: XI, Sec.: B

11 Fingers in Human Hand

One day a boy named Ankit was playing with his friend Jasmine .When Jasmine asked “How many fingers do you have?”He said “I have 11 fingers.” Then she asked “how?” Then Ankit said “If I show you how you have 11 fingers you will give me your chocolate.” Jasmine agreed. He said
“On your left hand, back count 10, 9, 8, 7, 6.”

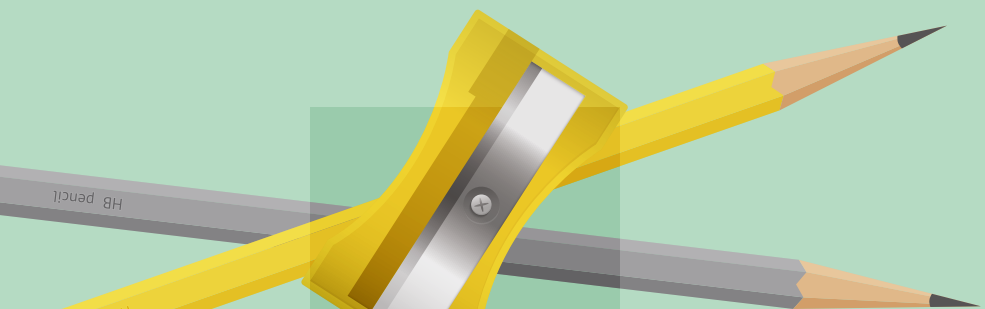
He stopped “On your right hand you have 5 fingers, so how much is 6+5” Jasmine said “11” Ankit said “So we have 11 fingers.” So she gave the chocolate and she counted her finger again but she got 10 she was confussed when she turned to Ankit Jasmine saw him run away. She went to her home and told her mother about Ankit’s prank . Her mother also laughed and said that it was a magic of numbers that he played with her.

Kirtana Saikia
Class: IV, Sec.: H

Mathematics

Mathematics is
A subject
That surely
Has and is
Endless at first; having
Methods which
Assures us
That in any way,
It's ever
Completion is always
Second!!

Koushik R. K.
Class: X, Sec.: F



Triangular Number Sequence

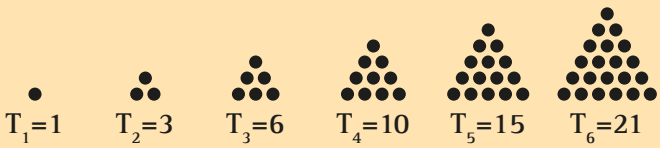
Definition:
Triangular numbers sequence is a pattern of number sequence that formed by creating equilateral triangles. The triangular number sequences are 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, 153, 171, 190, 210, 231, 253, 276, 300, 325, 351, 378, 406, 435, 465, 496, 528, 561, 595, 630, 666...

How to construct the Triangular Sequence:

- The first triangle has just one dot.
- The second triangle has another row with 2 extra dots, making 1+2 = 3
- The third triangle has another row with 3 extra dots, making 1+2+3 = 6
- The fourth has 1+2+3+4 = 10
- And so on... ...

Here, each subsequent number in the sequence adds a new row of dots to the triangle.

Pictorial diagram of Triangular Sequence:



Rule to find out Triangular Sequence:
The n^{th} triangular sequence will be $n(n+1)/2$.
Thus, 60^{th} triangular number will be
$60(60+1)/2=1830$

Practical application of the Triangular Number:
In a wood factory logs are kept in triangular way as shown in picture. If the base has 30 logs kept side-by-side, how many logs can one fit in the stack?

Answer:
One can keep $30(30+1)/2=465$ logs in the stake.

Debadreet Banik
Class: V, Sec.: H

MATHEMATICS - key of science

There once was a subject
I could not adore.
The subject was maths and thought
It was a bore.
For some reasons I always just
Hated it to the core.
But now that I'm learning,
I like it more and more

Cause once I put my soul into it,
I knew that me doing maths
was gonna be hit.
Solving maths became so easy,
I thought it was lit.
And now I solve maths everytime
When I sit.

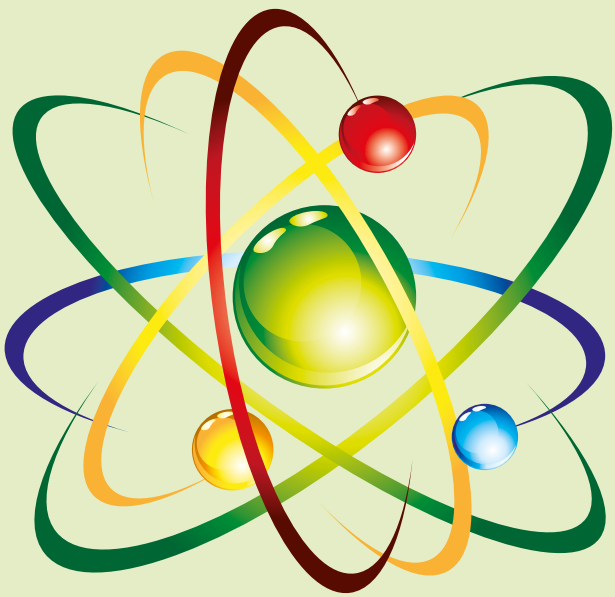
Abrang dususow
Class: VIII, Sec.: F

It is said that Mathematics is the gate and key of the Science. According to the famous Philosopher Kant, "A Science is exact only in so far as it employs Mathematics". So, scientific education which does not commence with Mathematics is said to be defective as its foundation. Neglect of mathematics works injury to all knowledge.

One who is ignorant of mathematics cannot know other things of the World. And mathematics has played a very important role in building up modern Civilization by perfecting all Science.

It is modern age of Science and Technology, emphasis is given on Science such as Physics, Chemistry, Biology, Medicine and Engineering, Hence, "Mathematics is a Science of all sciences and art of all arts".

Gitartha Protim Das
Class: VI, Sec.: A



The Importance of Zero

Though people have always understood the concept of nothing or having nothing, the concept of zero is relatively new; it fully developed in India around the fifth century A.D., perhaps a couple of centuries earlier. Before then, Mathematicians struggled to perform the simplest arithmetic calculations. Today, zero — both as a symbol (or numeral) and a concept meaning the absence of any quantity - allows us to perform calculus, do complicated equations, and to have invented computers.

"The Indian [or numerical] zero, widely seen as one of the greatest innovations in human history, is the cornerstone of modern Mathematics and physics, plus the spin-off technology," said Peter Gobets, secretary of the ZerOrigIndia Foundation, or the Zero Project. The foundation, based in the Netherlands, researches the origins of the zero digit.

Early history: Angled wedges

Zero as a placeholder was invented independently in civilizations around the world, said Dr. Annette van der Hoek, Indiologist and research coordinator at the Zero Project. The Babylonians got their number system from the Sumerians, the first people in the world to develop a counting system. Developed 4,000 to 5,000 years ago, the Sumerian system was positional-the value of a symbol depended on its position relative to other symbols.

Robert Kaplan, author of "The Nothing That Is: A Natural History of Zero," suggests that an ancestor to the placeholder zero may have been a pair of angled wedges used to represent an empty number column. However, Charles Seife, author of "Zero: The Biography of a Dangerous Idea," disagrees that the wedges represented a placeholder.

The Sumerians' system passed through the Akkadian Empire to the Babylonians around 300 B.C. There, Kaplan agrees, a symbol appeared that was clearly a placeholder — a way to tell 10 from 100 or to signify that in the number 2,025, there is no number in the hundreds column. Initially, the Babylonians left an empty space in their cuneiform number system, but when that became confusing, they added a symbol — double angled wedges-to represent the empty column. However, they never developed the idea of zero as a number.

Zero in the Americas

Six hundred years later and 12,000 miles from Babylon, the Mayans developed zero as a placeholder around A.D. 350 and used it to denote a placeholder in their elaborate calendar systems. Despite being highly skilled Mathematicians, the Mayans never used zero in equations, however. Kaplan describes the Mayan invention of zero as the "most striking example of the zero being devised wholly from scratch."

India: Where zero became a number

The Importance of Zero

Some scholars assert that the Babylonian concept wove its way down to India, but others, including those at the Zero Project, give Indians credit for developing numerical zero independently. "We are of the view that in ancient India are found numerous so-called 'cultural antecedents' that make it plausible that the mathematical zero digit was invented there," said Gobets, whose organization is composed of academics and graduate students devoted to studying the development of zero in India. "The Zero Project hypothesizes that mathematical zero ('shunya', in Sanskrit) may have arisen from the contemporaneous philosophy of emptiness or Shunyata," said Gobets. If philosophical and cultural factors found in India were important to the development of zero as a mathematical concept, it would explain why other civilizations did not develop zero as a mathematical concept, said van der Hoek.

According to the book "The Crest of the Peacock; Non-European Roots of Mathematics," by Dr. George Gheverghese Joseph, the concept of zero first appeared in India around A.D. 458. Joseph suggests that the Sanskrit word for zero, śūnya, which meant "void" or "empty" and derived from the word for growth, combined with the early definition found in the Rig-veda of "lack" or "deficiency." The derivative of the two definitions is Śūnyata, a Buddhist doctrine of "emptiness," or emptying one's mind from impressions and thoughts.

"From this philosophy, we think that a numeral to use in mathematical equations developed," said van der Hoek. "We are looking for the bridge between Indian Philosophy and mathematics."

"Zero and its operation are first defined by [Hindu astronomer and mathematician] Brahmagupta in 628," said Gobets. He developed a symbol for zero: a dot underneath numbers. "But he, too, does not claim to have invented zero, which presumably must have been around for some time," Gobets added.

An inscription on a temple wall in Gwalior, India, dates back to the ninth century, and has been considered the oldest recorded example of a zero, according to the University of Oxford. Another example is an ancient Indian scroll called the Bhakshali manuscript. Discovered in a field in 1881, researchers thought it also had originated in the ninth century. However, recent carbon dating has revealed that it was probably written in the third or fourth century, which pushes the earliest recorded use of zero back 500 years.

Marcus du Sautoy, a professor of mathematics at the University of Oxford, said, "Today we take it for granted that the concept of zero is used across the globe and is a key building block of the digital world. But the creation of zero as a number in its own right, which evolved from the placeholder dot symbol found in the Bakhshali manuscript, was one of the greatest breakthroughs in the history of mathematics.

"We now know that it was as early as the third century that mathematicians in India planted the seed of the idea that would later become so fundamental to the modern world. The findings show how vibrant mathematics have been in the Indian sub-continent for centuries."

Chandrani Kashyap
Class: VII, Sec.: B

Tricks with your age

Write your age

For ex-10

Multiply it by 7

10*7=70

Again Multiply the answer it by 13

70*13=910

Multiply again that answer by 11

910*11=10010

Now check both the digite in the last.
Can you see the age?

Arnav Gupta
Class: VI, Sec.: G

Some Jokes

Why should you never believe a clock?

ANSWER: It's usually second and information.

Why are obtuse angles so depressed?

ANSWER: Because they're never right.

Why do plants hate Math?

ANSWER: Because it gives them square roots.

How do you know carrots are good for our eyes?

ANSWER: You never see a Rabbit wearing Glasses..

Which is the favourite type of tree for a Maths teacher?

ANSWER: a "Geome-tree".

Police Officer: "How high are you"?
Pothead: "No Police Officer," It's
"Hi, How are you?"

Why do we write 'etc' at the end in the exam?

ANSWER: E: End of.
T: Thinking .
C: Capacity.

Teacher: "Count 1 to 10?"
Student: " 1,2,3,4,5,7,8,9,10"
Teacher: "Where is 6, you didn't count it".
Student: "Today in the morning news, I heard that 6 died in a road accident."

Teacher: Why are you late today?
Student: Because of the sign down the road.
Teacher: What does a sign have to do with you being late?
Student: The sign said, "School Ahead, Go Slow!"

Gitartha Protim Das
Class: VI, Sec.: A

Some Jokes

SCHOOL LIFE

Most Irritating Moments

-Morning Alarm.

Most Difficult Task

-To find socks.

Most Dreadful Journey

-Way to class.

Most Lovely time

-Meeting with friends.

Most Tragic Moments

-Surprise Test in First Period.

Most Wonderful News

-Teacher is absent.

AN ARTICLE ABOUT MATHEMATICS

It is said that Mathematics is the gate and key of the Science. According to the famous Philosopher Kant, "A Science is exact only in so far as it employs Mathematics". So, scientific education which does not commence with Mathematics is said to be defective as its foundation. Neglect of Mathematics works injury to all knowledge.

One who is ignorant of Mathematics cannot know other things of the World. And Mathematics has played a very important role in building up modern Civilization by perfecting all Science.

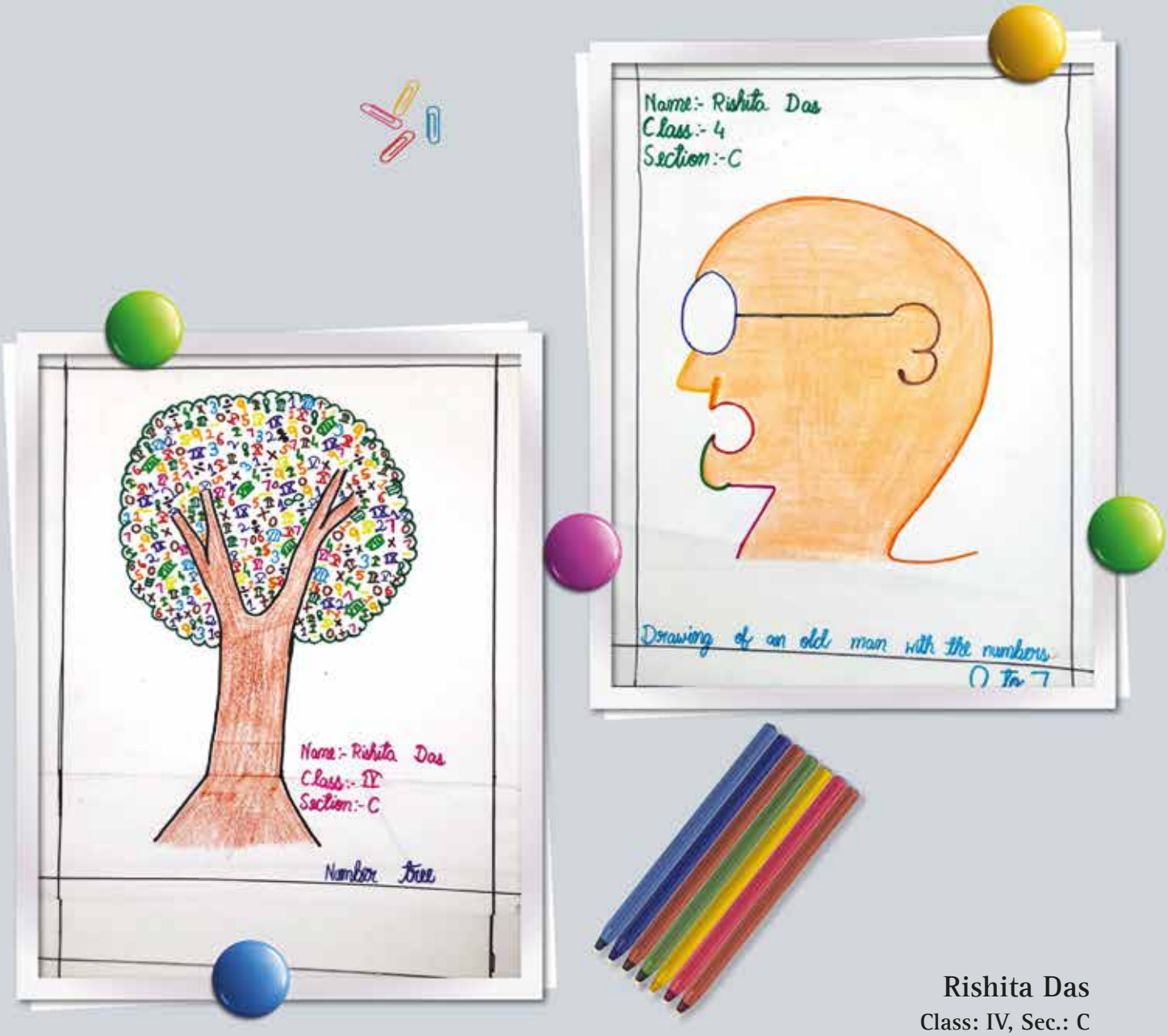
It is modern age of Science and Technology, emphasis is given on Science such as Physics, Chemistry, Biology, Medicine and Engineering, Hence, "Mathematics is a Science of all Sciences and Art of all Arts".

Gitartha Protim Das
Class: VI, Sec.: A

Drawing

Pragyaa Prapti Borah
Class: X, Sec.: D

Drawing

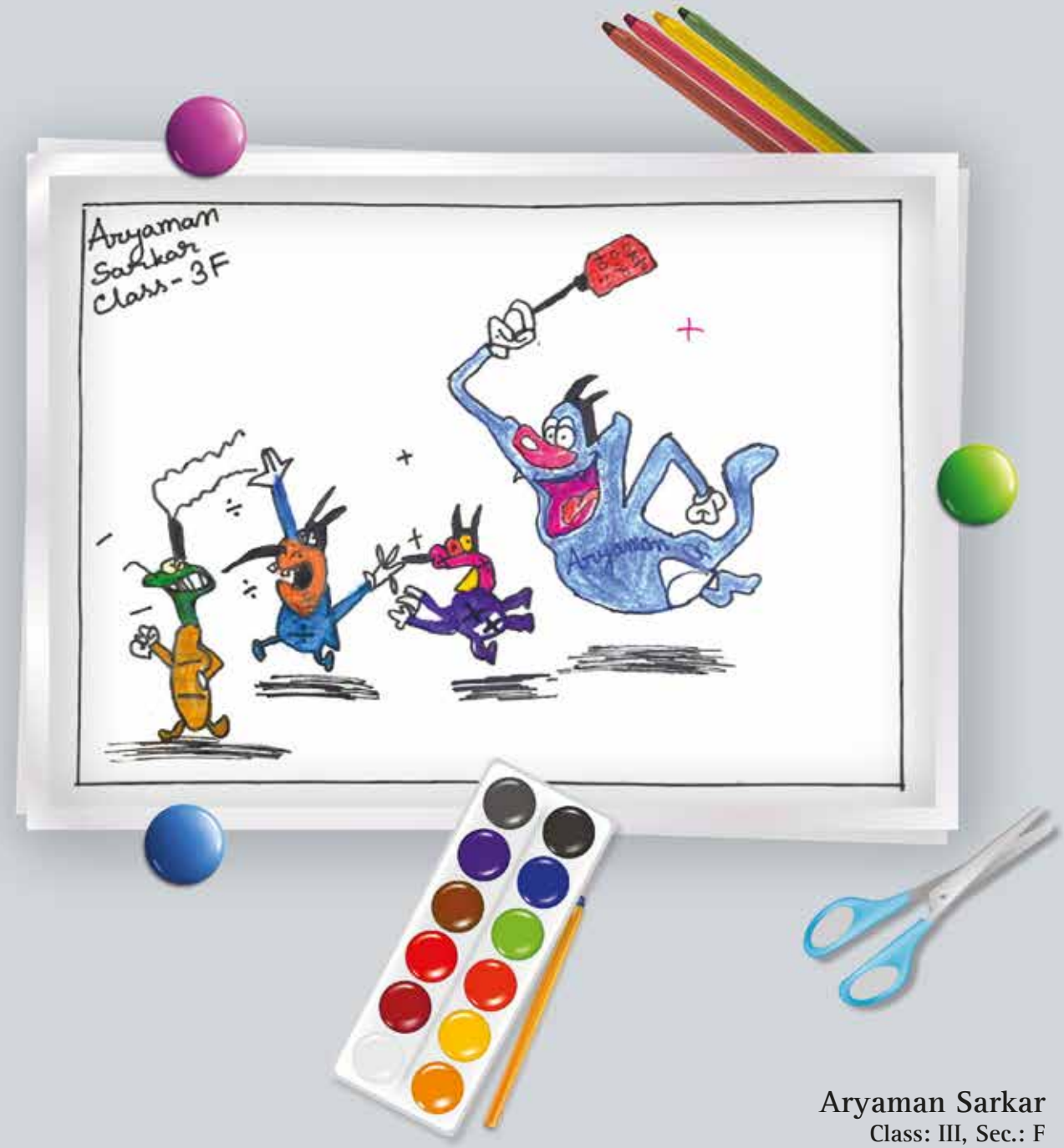


Rishita Das
Class: IV, Sec.: C

Drawing

Sohanshinee Ray Choudhury
Class: III, Sec.: D

Drawing



Aryaman Sarkar
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