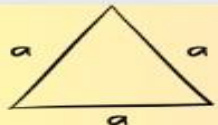


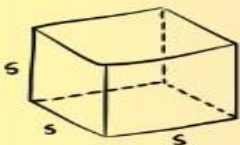
CHINMAYA VIDYALAYA
VASANT VIHAR ,NEW DELHI

SESSION 2023-24

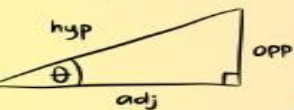
MATHEMATICAL MUSINGS



$$A = \frac{\sqrt{3}}{4} a^2$$

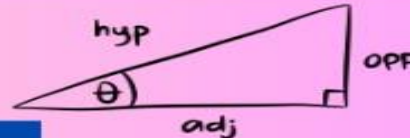


$$V = s^3$$

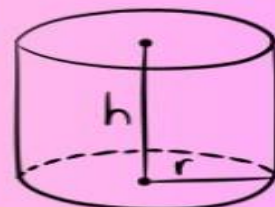


$$\cos(\theta) = \frac{\text{adj}}{\text{hyp}}$$

$$\frac{x}{a} + \frac{y}{b} = 1$$



$$\sin(\theta) = \frac{\text{opp}}{\text{hyp}}$$



$$V = \pi r^2 h$$



E - NEWSLETTER

$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \quad d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

FROM THE PRINCIPAL'S DESK



Hari Om!

Dear Parent

Without Mathematics, there's nothing you can do. Everything around you is Mathematics. Everything around you is numbers." – Shakuntala Devi.

I am delighted to introduce the Mathematics E-Newsletter -Mathematical Musings, which showcases the talent and dedication of our learners and facilitators. This E-Newsletter, is a platform which not only provides plethora of exciting articles, puzzles, games etc. on the fascinating world of numbers, equations, and mathematical concepts but also a blend of interesting information and inspirational ideas in the area of Mathematics.

Remember, Mathematics is not just about solving equations or playing with numbers; it is about cultivating problem-solving skills, critical thinking, and a lifelong love for learning. Embrace the challenges, as they are opportunities for growth and discovery. Keep asking questions, seeking answers, and never stop exploring the beauty of Mathematics.

I would like to express my appreciation for the hard work and dedication of our learners, Mathematics Department and parents for their unwavering support and dedication in the pursuit of excellence in education.

I hope you find this newsletter informative and inspiring.

Enjoy reading!

Principal

Archana Soni

EDITORIAL

Hari Om!

Dear Readers

Mathematics is not just a subject; it is a vibrant and ever-evolving field that shapes our understanding of the universe and empowers us to solve complex problems.

It serves as the cornerstone for a multitude of disciplines and offers the analytical tools needed to navigate a world driven by data and algorithms.

This edition of Mathematics E-Newsletter – Mathematical Musings reflects the dedication, hard work, and enthusiasm of our Mathematics Department, as well as the creativity and novel ideas of our learners.

I also extend my appreciation to the parents who play a crucial role in supporting the learners in the mathematical journey. Your involvement and encouragement are invaluable.

In closing, I encourage you all to embrace the wonders of Mathematics with an open heart and a curious mind. Whether you are a seasoned mathematician or just beginning your journey, there is always something new and fascinating to discover in the world of numbers.

Warm Regards

Dhiraj Singh Rawat
HOD (Mathematics)

PROUD MOMENT

1. In the MUN competition organized by Nirmal Bhartia School, Dwarka.
 - Anuraag Nambiar of class XII secured 1st position in the best delegate category
 - Lakshit Mishra of class X secured 3rd position in the special mention category
2. In the District Level Cultural Activities by DOE
 - Madhurita Banerjee of class XII secured 1st position in the semi classical category.
 - Sharanya Sharma of class XII secured 1st position in the classical category.
3. In the Inter-School Competition organized by DAV Public School, Dayanand Vihar:
 - Mudit Ranjan, Eshant Ratan, Aayushman Govil and Nitya Shriram of class XII secured 1st position in the Kubrikism category in Movie-Making Competition
 - Arav Saini and Ananya Srivastava of class IX secured 2nd position in the Game-A-Thone category in the Scratch Coding Competition
 - Gyanesh Nayak of class IX secured 3rd position in the Minecraft category in the Minecraft Minigames Competition
4. AJR Anuraag Nambiar, Ratnisha and Vandita Bhardwaj of class XII secured the position of First Runner Up and received the rolling trophy in the 32nd Inter-Institutional quiz contest organized by Manav Sthali School, New Rajinder Nagar.
5. Zayn Khan (Class XI) and Vandita Bhardwaj (class XII) secured first position in the 'Art from Recycled Waste' category in the event "30th perfect Health Mela Inter-School Competition" organized by Heart Care Foundation of India (HCFI), Dilli Haat (Pitampura).



Celebrations Galore



GANDHI JAYANTI

Vidyalaya celebrated Gandhi Jayanti on 3rd October 2023. Children learnt the benefit of the extraordinary qualities i.e truth and non-violence of Mahatma Gandhi through an engaging and enriching session.

MATR PITR ABHINANDAN

"Matr-Pitra Abhinandan," was celebrated on 5th October, 2023 and 6th October, 2023 as a tribute to the very source of our existence - our parents. The students expressed their love, gratitude, and respect for their parents by worshipping them and bowing at their feet.



WORLD MENTAL HEALTH WEEK 2023

Mental Health Week was observed from 4th October to 10th October. The week was filled with various activities aimed to raise awareness about the importance of mental health among students and to reduce stigma around mental health issues and encourage open discussions.

GLOBAL HANDWASHING DAY

The Pre-Primary Department organized a Global Hand Washing activity on 13th October 2023. Through "the pepper and soap experiment", learners learnt how soap destroys viruses. A demo of proper step by step hand washing was given to acquaint the learners with the significance of keeping their hands germ-free.



WORLD FOOD DAY

The Pre - Primary department celebrated World Food Day on 16th October 2023. The learners were given a chart which was divided into two segments namely healthy side and unhealthy side. The tiny tots were encouraged to identify, sort, and paste the healthy/ unhealthy food cut outs on the respective sides.

CLASS I PRESENTATION

The little learners of class I hosted their Class Presentation, Wild About Animals, on 18th October 2023 with great zeal and excitement. The occasion was graced by Shri Atul Karanjakar, the Zonal Director, CCMT Education Cell.



DUSSEHRA

The learners of Pre- Primary Department celebrated Dussehra on 20th October 2023 where they were encouraged to colour the picture of Lord Rama. The qualities of Lord Rama were shared through an engaging story on the interactive panel.

BUZZING BEE ACTIVITY

To strengthen the verbal skills and to foster public speaking competency in the young minds, the Pre-Primary Department organised a Buzzing Bee activity on 27th October 2023. Our little learners were excited to share their rhymes and waited eagerly for their turn to participate in the activity.



SPORTS WEEK

Our exhilarating Sports Week at School was filled with thrilling events and enthusiastic participation. The little learners from Pre-primary showcased their athleticism and teamwork in a series of exciting events like Aerobics, Hoopla walk, and Hurdle walk! The school grounds echoed with cheers as young athletes raced freely, embracing the spirit of camaraderie. Students showcased their Motor skills, demonstrating precision and teamwork, exhibiting their sports prowess and strategic play.

NATIONAL UNITY DAY

To commemorate the birth anniversary of Sardar Vallabhbhai Patel, learners from Primary Department presented a special assembly on 'Rashtriya Ekta Diwas' on 30th October 2023.



INTER HOUSE COMPETITIONS

PASSWORD PERIL

A CYBER SECURITY BREACH

INTER-HOUSE DIGITAL COMIC STRIP MAKING COMPETITION FOR CLASSES IX-X

Inter House digital comic strip making competition was organized on 13.10.23 for classes IX -X. Participants were given themes such as Cyber Security, Harry potter of my class and Life of a backbencher. The event gave participants a good platform to showcase their thinking, analytical and creative skills.



INTER-HOUSE CODING COMPETITION FOR CLASSES XI-XII

To inculcate the learning habit of Coding/Programming among the students and to give them dimension to think creative and constructive, Inter-House coding competition using **Python** and **MySQL** language was organized for classes XI-XII on 13.10.2023.





CLUB ACTIVITIES AT A GLANCE (SENIORS)...

- ASTRONOMY CLUB
- ART CLUB
- MUN
- MULTIMEDIA CLUB
- QUIZ CLUB
- ECO CLUB
- ROBOTICS CLUB
- DANCE CLUB
- MUSIC CLUB
- SEWA CLUB
- HERITAGE CLUB
- PUBLIC SPEAKING
- INTERACT CLUB





CLUB ACTIVITIES AT A GLANCE (PRIMARY)...



DRAMATICS CLUB

**FINANCIAL
LITERACY CLUB**

COMPUTER CLUB

**VEDIC MATHEMATICS
CLUB**

ECO WARRIORS CLUB

"We make a living by what we get, but we make a life by what we give. Only a life lived for others is a life worthwhile."

Sewa connects us to others and makes them a part of us. Service, whatever form it takes, is the flow of love from one human being to another. Sincere giving—without any expectation of return—breaks the boundaries of conditional love and expands our ability to love every human being unconditionally.

This Diwali Students of the Vidyalaya joined hands in the initiative under 'Joy of Giving' by helping the ones in need. 'Each One Donate One' Students to contributed Dry Ration, Money for Blankets on voluntary basis. Students with zeal of helping contributed to the maximum for the ones in need.

A glimpse of the same.....








ATL

**ATL - The platform for
Innovation and Creativity. . .**

- Some of the innovative projects undertaken are Ganga Setu, Auto-Street Lights, Smart Devices, Surface Cleaner, Voice Controlled Car, Smart Bridge, Smart Home, RADAR and Obstacle Detector.
- Manas Pandey and Prakrit of class XB made the Drone, and its flight was recorded in the Vidyalaya's basketball court.

The background is a dark brown to black gradient, overlaid with various mathematical symbols in a lighter brown, semi-transparent, 3D-style font. Symbols include pi (π), infinity (∞), numbers (1, 2, 3, 4, 5, 6, 7, 8, 9, 0), plus (+), minus (-), multiplication (×), division (÷), and percent (%).

***STUDENT'S
ZONE***

The Math behind Cryptography

Introduction

Cryptography is the technique of coding a message using complex mathematical keys, such that they can be read by only those who know the key. The message is converted to code (cipher-text) using the cipher or the cryptographic algorithm, and this process is called encryption. The process of converting the cipher-text back to the original message is called decryption.

The need for cryptography

Cryptography has been widely used in spying, warfare and incognito communication. Historically, ciphers have been famous since the World Wars. But their use has been documented before as well. A notable example is the Caesar Cipher, which exchanges letters of the alphabet in a constant order. For example, 'I am writing a code' can be encrypted to 'JBNXSJUJOHBDPEF', where the key is to subtract a letter from each letter of the cipher-text (this means that J becomes I, B becomes A, and so on; A will become Z). To make the cipher-text more complex, no spaces are left and all letters are written in capital. There are other forms of cryptography as well. Some notable examples are Morse Code, the enigma machine, etc.

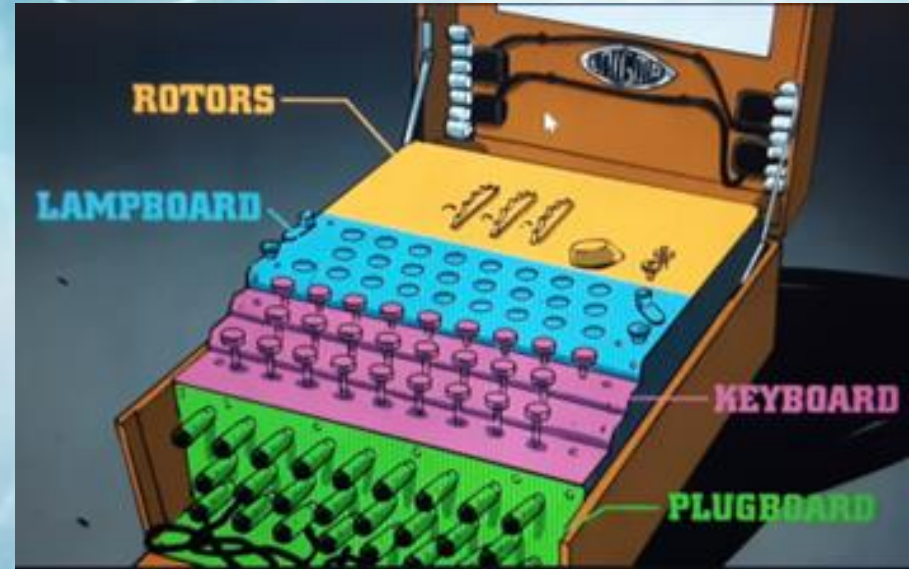
The use of Mathematics in Cryptography

To completely understand the use of mathematics in cryptography, we must thank Sir Alan Turing, the inventor of the Turing machine. During World War II, the Turing machine was a device used to crack the German codes which were sent to German soldiers through the German Enigma machine. The decryption process involved analysis of Permutations and Combinations on a large scale, along with language letter percentage composition on average. This is because the enigma machine used encryption processes far more complex than a Caesar Cipher. The procedure involved multiple changes in the cryptographic algorithm within the same message, and then the basic skeletal code changing daily. This basically made it much tougher to decode the message, as the language analysis part became harder as the letters were no longer constant (For example- In one part of the cipher-text 'e' could be changed to 'I', while in another part of it 'e' could be changed to 'X'). It required high levels of patience and effort even from those who knew the complete cryptographic algorithm to crack the code to get the message. While for those who did not know the message, the permutations increased to a staggering 158,962,555,217,826,360,000. The Turing machine managed to crack the Enigma machine's code simply because the Germans sent out 'Heil Hitler' at the end of each code. So all the Allies had to do was to crack the cipher-text for 'Heil Hitler' daily and they would crack all the codes for that day.



The uses of Cryptography in Modern Times
Nowadays, cryptography can be used for many things. Just like any form of technology, it has both a positive and a negative side. People can use cryptography for digital signatures, electronic money transfers, secure network communications, disc encryption and other safety features. On the flip side, hackers and cyber criminals can always exploit weak encryptions to gain access to sensitive information.

To conclude, cryptography has many uses, and in the hands of the wrong people, it can be a dangerous weapon that in today's times, can lead to a Third World War. So whenever using cryptography, use it well, safely and wisely.



A. J. R. Anuraag Nambiyar
XII-A

Mathematics is full of fun

*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 is full of history
Lines are parallel
Angles are similar
Math is necessary in life
Without it , it is difficult to survive.*

Vatsal Yadav
IV-C

*Math! Math! Math!

*What a fun subject !
New things to learn and
write
Math is everywhere , in the
house , in the ground
Math is my favourite
I love math , you love math
Everyone loves math
Plus, minus , multiply ,
divide
So fun! The world is full
of math !*

Suhasini Raha Roy
IV-C

Circles of Life

Serpent with tail in the mouth you're a
strange symbol,
and profound
Everything in the universe returns to its
source ,
Even sound
Everything doubles back on it's track,
All things are round
Life is a circle, it is a cage of eternal
recurrence,
With no way out,
You may cry, you may rage, you may beat on
the door,
You may shout
But relentless, and vast and never ending
It circles about and about.

Ayush Jha
IX-B

Mathematics -Where are you?

Whether you go to school,
The speed, distance, time you cover;
Or ice cream you buy so cool,
All of them have math to discover.

You buy one book or two pen,
Use a bus, taxi or a train,
The cost, the fare all
Have some math in them.

Addition, multiples and geometry,
Are not just what math has for you.
Lots more from algebra, trigonometry,
And numerous theorems for you.

From the size of ball to bedcover,
Math will always be there.
But the more you discover,
You can find it everywhere..

Abhijeet
X D

A Mathematical Rap

They call me the math magician but now I'm (tm)²

Comin with that rap precision so you better be prepared

Cause I'm splitting math facts all day

Grab your pencil and your paper

Gotta keep up with what I say, you don't need a calculator

Now we gonna cover all the concepts

Pay attention so you can hear them

Sine, Cosine and Tangent with Pythagorean's theorem

Triangle keep it 180, Circles they go for 360 and just like π I plan on going for ∞

Now pass the book, yeah

I need to move on to the polygons but can't stay long got the octagon, decagon

Can't dwell on the polyhedrons

Need some concentrations for the transformations

Got the rotations and the translation

Now to combinations and to permutations

Now hear the celebrations

Another verse that I need to rap about

A lotta math that I need to rap about

So we gonna switch to Algebra

Graphing lines and parabolas

Solve for x it isn't so terrible

We gonna isolate the variable

Can we find roots of a quadratic

Zpp, it will be automatic.

Aryan Malik

VD

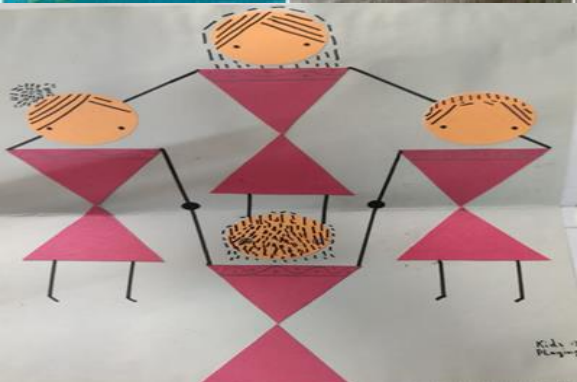
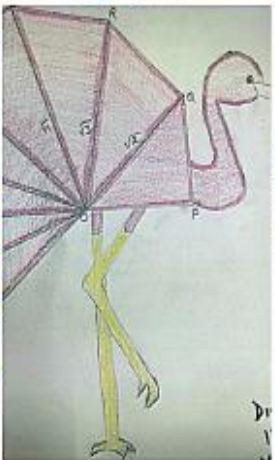
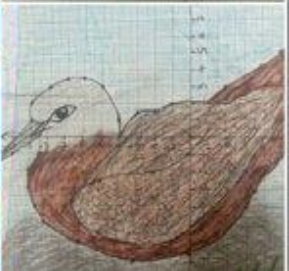
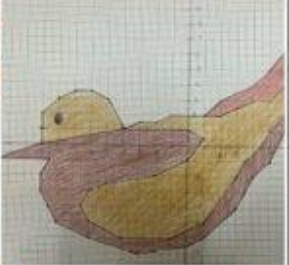
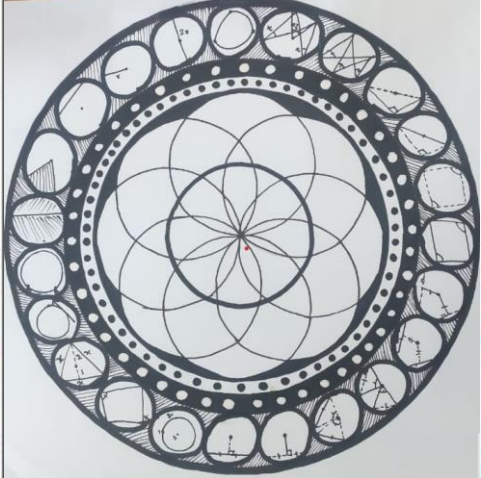
How to solve a story problem ?

*To solve a story problem
I read it a time or two
I think about the action
I think about what to do
I analyze the problem
I know that's very wise
I act it out if needed
I try to visualize
Sometimes I draw a picture
To show it part by part
Understanding the problem
Is where one needs to start !*

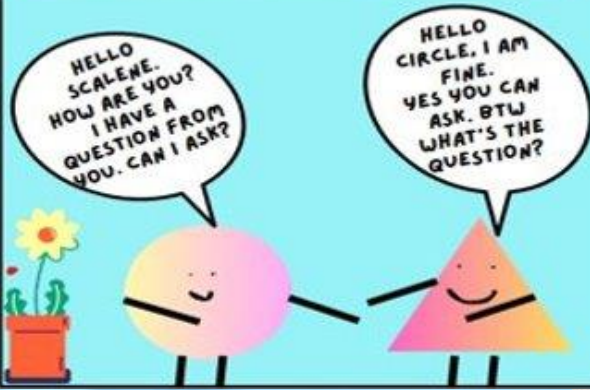
**Saanvi Singh
IV B**



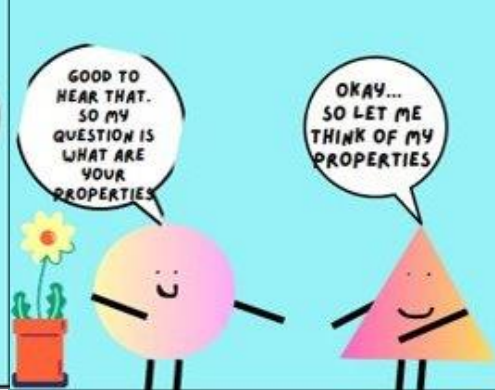
ART INTEGRATION



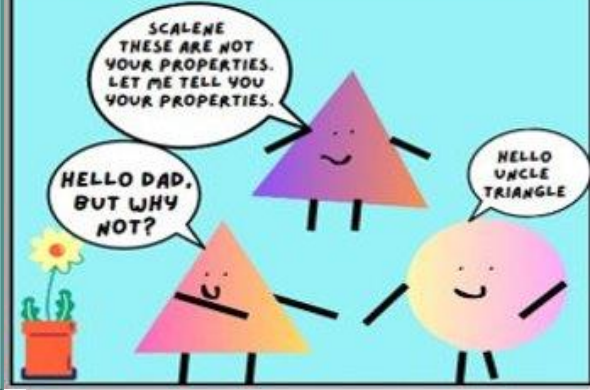
One day, two friends circle and scalene triangle were talking to each other



Circle asks his question.



As Scalene tell his properties wrongly his father goes to him and tells him his mistake.

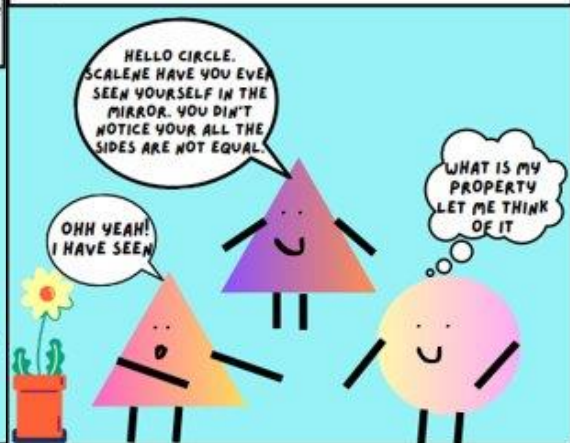


THE FORGOTTEN IDENTITY

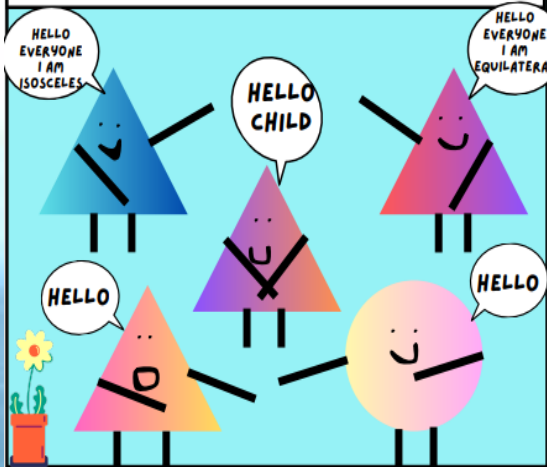
As Scalene starts to think about his properties, his father overheard the conversation as he was passing from there and stops to listen the answer.



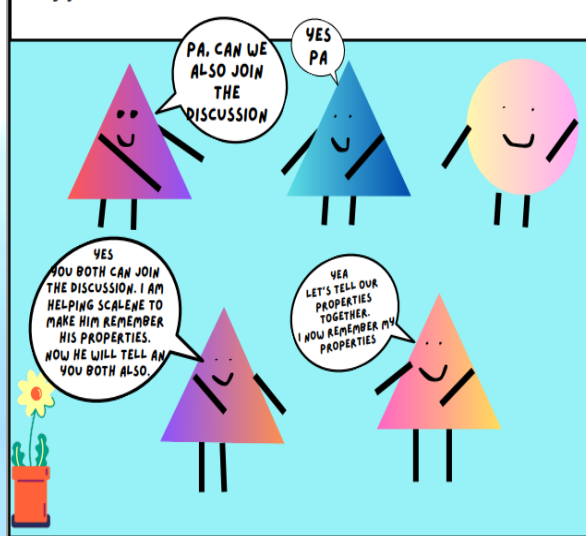
His father Triangle starts telling his right properties.



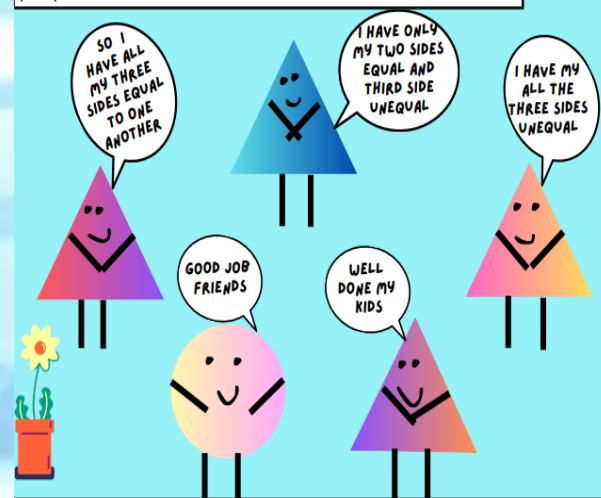
As the discussion was going on brother and sister of scalene arrived and joined the discussion.



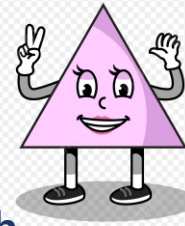
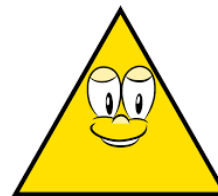
They joined the discussion



Equilateral, Isosceles and Scalene starts telling their properties



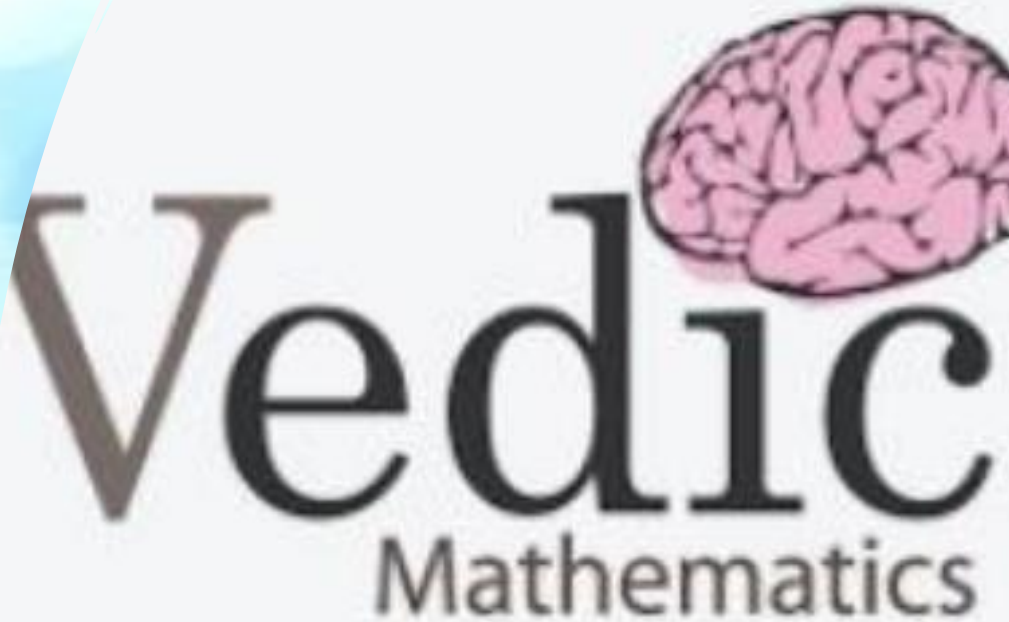
THE FORGOTTEN IDENTITY



Shreya Singh
IXC

VEDIC MATHEMATICS

- Vedic Math is a system of mathematics that was discovered by an Indian mathematician, Jagadguru Shri Bharathi Krishna Tirathji during A.D. 1911 and 1918. Vedic mathematics is also called mental mathematics in the mathematical world.
- The application of Vedic math in the simplification of numerical problems is many times faster than the modern methods of calculation.



TRICK TO CUBE

1. Take a number (suppose 12)
2. Take the cube of the first digit (if it is not a three digit number put zero(s) before of it)
3. Again take cube of the second digit digit (if it is not a three digit number put zero(s) before of it)
4. Multiply the digits 1, 2 and 3
5. Then multiply the product with the number 12.
6. Add the new product with the number (001008(obtained in step 1 and step 2))by leaving a gap from right.
7. The sum (001748 or 1748) is cube of number 12

$$[12]^3$$

$$\begin{array}{r} 001\ 008 \\ + \quad 72 \\ \hline 001728 \end{array}$$

$$1 * 2 * 3 = 6$$

$$12 * 6 = 72$$

Try

- $(15)^3$
- $(23)^3$

Aditya Kumar

VIII C

TRICK TO SQUARE NUMBER ENDING WITH 5

SQUARE OF A NUMBER WHOSE UNIT DIGIT IS 5

Vedic math trick to calculate square of a number whose unit is 5. You can quickly compute the square of a two-digit number that ends with 5.



Let's calculate
Square of 55



Step 1. Multiply 55 *
 $55 = \dots 25$ (end terms)



Step 2. Take $5 \times (5+1)$
 $= 30$



So, the answer
is 3025.

Try

- $(35)^2$
- $(85)^2$

TRICK TO FIND PRODUCT OF 2 DIGIT NUMBERS

PRODUCT OF TWO 2-DIGIT NUMBERS

Cross Multiplication Method

TO MULTIPLY 52 X 63

STEP 1: Multiply unit digits $2 \times 3 = 6$, it is the unit digit of the product.

STEP 2: Do cross multiplication of the digits of the number as shown below

$$5 \times 3 = 15$$

$$6 \times 2 = 12$$

Add these products

$15 + 12 = 27$ (7 is the tens place digit of the product number and 2 will be carry forward.

STEP 3: 52×63 (Multiply the right-side digits) $5 \times 6 = 30$

STEP 4: Add 2 with 30, $30 + 2 = 32$.

*STEP 5: Join them all and the answer is **3276***

Try

- 24×46
- 72×31

Saanvi Chandna
VIII A

➤ Tricks To Find the Cube Root of a Perfect Cube Number.
Example: **1,48,877**

- Divide the number into groups of three digits starting from right side.
- Now check the digit 148.
- ❖ We have to find the number whose cube is less than 148.
- ❖ $5^3 = 125$ i.e. less than 148.
- ❖ Write down the no. 5 below 551

148

877

5

3

Cube root of 1,48,877 = **53**

- ❑ Check the last digit of 877 i.e. 7
- ✓ As we know, if the last digit of a perfect cube is 7, then its cube root is 3. Ex- Cube root of $27=3$
- ✓ So, we replace 7 with 3

INVENTION OF ZERO (ZERO IS HERO)



The history of zero goes back to the 5th century. In the 5th century, a well-known mathematician and astronomer named Arayabhata introduced zero in India. Earlier, zero was represented a dot in mathematics and later when it reached Arab, an oval shape was given to the number that is today known as the '0' digit. This is the reason why zero belongs to the Hindu-Arabic numeral system. After Arayabhata, Brahmaputra started using zero in mathematical operations. Therefore, it can be said that Aryabhata invented zero.

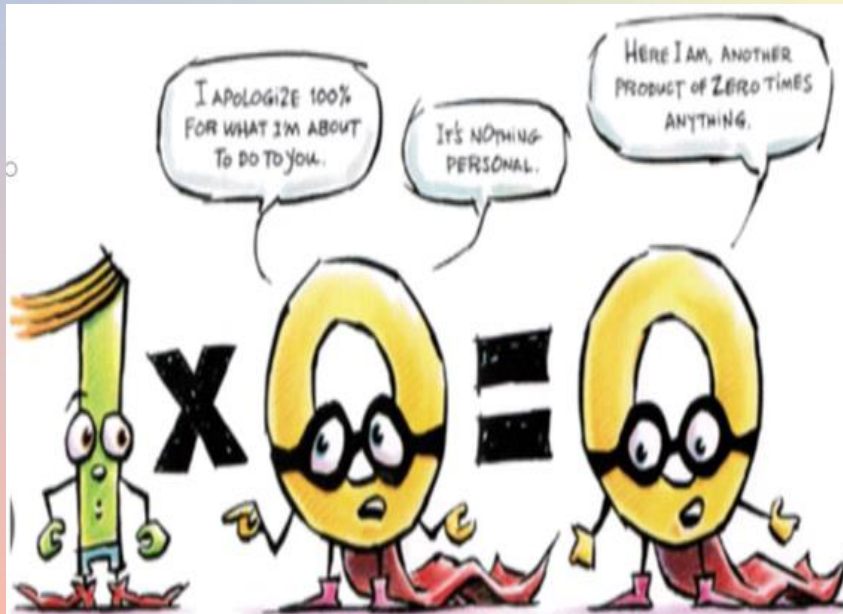
ZERO IS HERO:

*In this hilarious and math-rich story, zero thinks she is a hero but the other number do not agree. After all, you can't count nothing. And if you add 0 to another number or subtract 0 from it, nothing happens. Sometimes the numbers even think zero is the donut or the letter O. But one day, when they are captured by vicious Roman Numerals, the numbers cry out for help. Zero the Hero come to their rescue. **What is her magic power?***



When zero is added to a number or subtracted from a number, the number remains unchanged; and a number multiplied by zero becomes zero. You can't divide any number by zero. Writing a 0 to the right of any number produces a tens number (and then hundreds and thousands...). Rounding up and down sometimes requires a number with 0 on the right.

Still his belief in his wonderfulness persisted. Then one day, during multiplication, it was discovered that any number times Zero equals..... you guessed it right ! It is Zero.



Anaaya Dhal
IV D



A vibrant, cartoon-style collage of mathematical tools and symbols. In the top left, a notebook page shows a right-angled triangle with sides labeled 'a' and 'b', and the equation $a^2 + b^2 = c^2$ written below it. A pencil lies across the notebook. To the right, a yellow calculator is partially visible. In the top right, a yellow triangular ruler is shown. In the bottom left, a large orange protractor is visible. In the bottom right, a yellow calculator is shown in more detail. A green eraser and another pencil are at the bottom center. Dashed black lines connect various elements across the scene. The background is a light beige color with faint horizontal lines.

GAMING WITH MATHEMATICS



Math Riddles



Q1- How many sides does a circle have?

Q2- What number goes up and doesn't come back down?

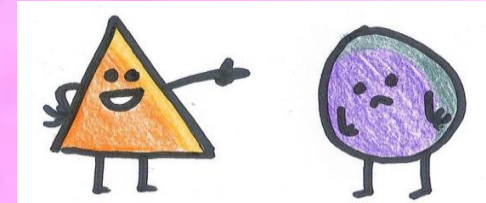
Q3- Which month has 28 days?

Q4- What did the triangle say to the circle?

Q5- If 6 people took 9 hours to build a wall, how long would it take 12 people to build the same wall?

Q6- What did one math book say to another math book?

Q7- What is the maximum possible number of times you can subtract 5 from 25?



Amyra Vats

V-A

SCRATCH YOUR BRAIN FOR THIS!

1. Shreya's monthly pocket money is ₹42 more than Divya's. Divya spends ₹54 more than Shreya every month. Divya's savings is $\frac{1}{2}$ of Shreya's monthly savings. If Shreya spends $\frac{3}{7}$ every month, what is her pocket money of the entire year?
2. Mrs. Katariya and Mrs. Singh together had 3L of tea to sell. After Mrs. Katariya sold $\frac{1}{2}$ of her stock and Mrs. Singh $\frac{3}{7}$, they had the same amount left. After Mrs. Singh sold 200ml of tea, how many ml of tea was left?
3. Malena distributed her salary in ratio of 5:4:2 for food, transport and savings. How much did she save if her salary is $\frac{64}{11}$ of 15000?
4. Study the pattern and fill the blank

$$4 \times 4 - 3 \times 3 = 7$$

$$21 \times 21 - 20 \times 20 = 41$$

$$42 \times 42 - 41 \times 41$$

$$105 \times 105 - 104 \times 104 = \underline{\quad}$$

Nia
V B

MATH-O-RIDDLE

1. *If $1=3$, $2=3$, $3=5$,
 $4=4$, $5=4$, Then, $6=?$*

2. *How many triangles
can you count in
this shape?*



3. *I am an odd number.
Take away one letter
and I become even.
What number am I?*

4. *What
number doesn't ha
ve its own
Roman Number?*

5. *Move one matchstick
to make the equation
valid*



**Keshav Krishnan
V A**

CROSSWORD

ACROSS

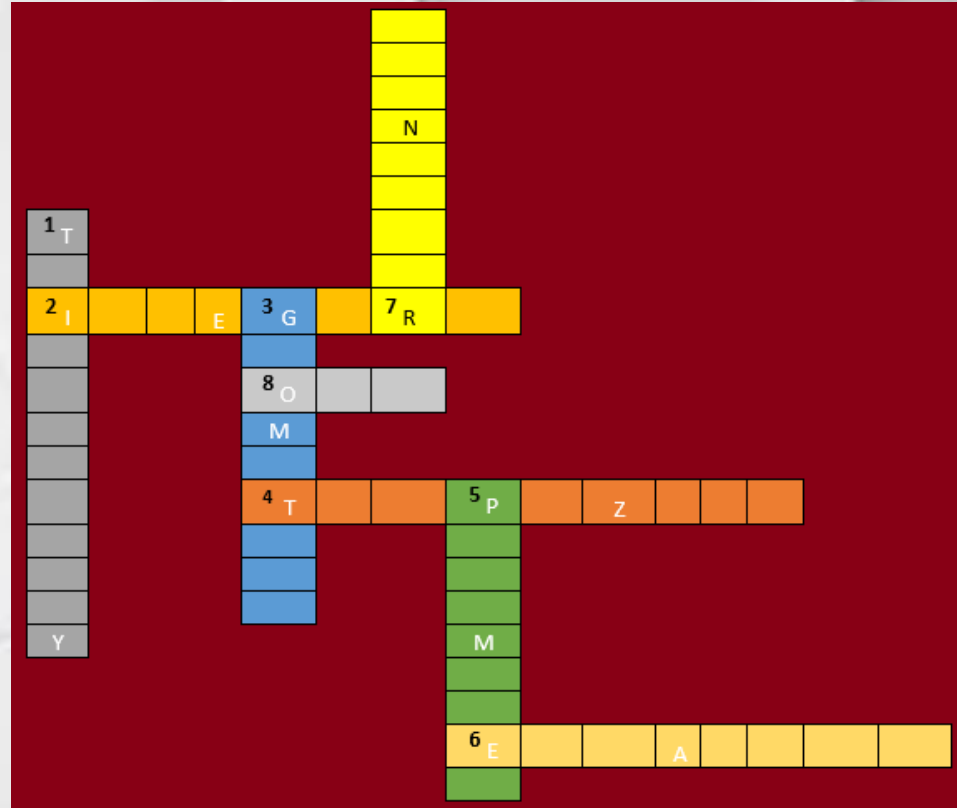
2. It is positive and negative.
4. A quadrilateral which exactly has one pair of parallel sides.
6. The problem to be solved.
8. Number that is not divisible by 2.

UP

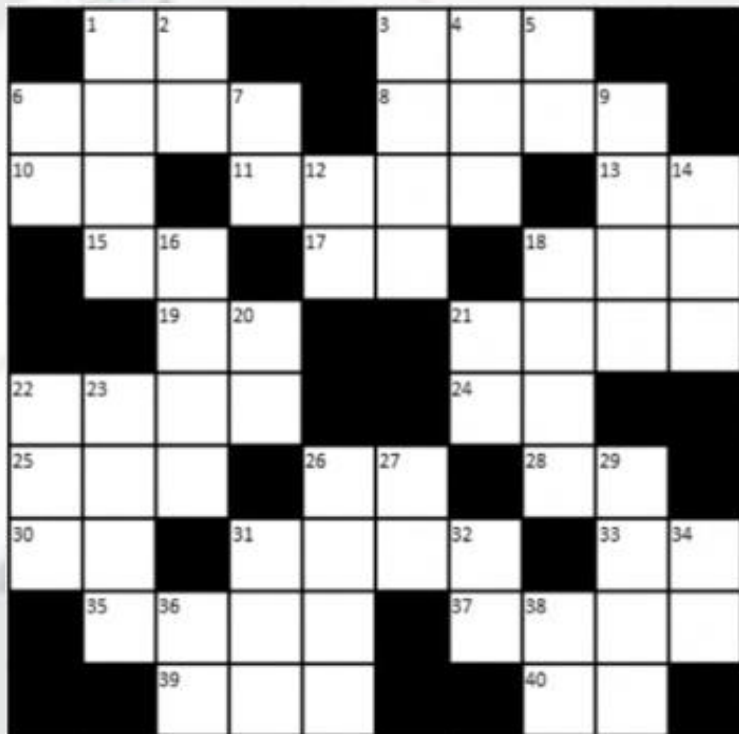
7. A number which remains when a number is divided by an another number.

DOWN

1. A study of relationships between angles, lengths, and heights of a triangle.
3. It helps us how to make shapes of different sizes.
5. A distance around a closed plane Figure.



CROSS NUMBER



ACROSS

1. 22 - 9
3. 159 - 13
6. 465 + 750
8. 2329 + 3294
10. 25 - 10
11. 18833 - 9266
13. 20 - 7
15. 15 + 16
17. 120 - 24
18. 952 - 344
19. 99 - 40
21. 445 + 8975

DOWN

- | | |
|-----------------|------------------|
| 22. 1496 + 930 | 20. 27 + 69 |
| 24. 124 - 46 | 21. 183 - 86 |
| 25. 1290 - 300 | 22. 338 - 42 |
| 26. 98 - 44 | 23. 280 + 4692 |
| 28. 11 + 5 | 26. 10786 - 5144 |
| 30. 27 + 40 | 27. 27 + 22 |
| 31. 9284 - 2589 | 29. 12200 - 5879 |
| 33. 44 - 10 | 31. 687 - 67 |
| 35. 3292 - 768 | 32. 62 - 11 |
| 37. 9 + 1616 | 34. 21 + 24 |
| 39. 858 - 356 | 36. 61 - 6 |
| 40. 1 + 10 | 38. 17 + 44 |



TEACHER'S CORNER



“Harmonious Mathematics: The Magical Connection Between Math and Music”

Mathematics and music, two seemingly distinct worlds, are actually deeply intertwined. From the harmonious melodies of Mozart to the complex compositions of Bach, mathematics is the hidden key that unlocks the beauty of music. In this article, we will explore the profound relationship between math and music, revealing the ways in which numbers and notes come together to create harmonious masterpieces.

The Mathematical Foundations of Music

- **The Rhythm of Ratios:** At the heart of music lies rhythm, and at the heart of rhythm lies mathematical ratios. The division of time in music, such as whole notes, half notes, and quarter notes, is all about fractions and proportions.

- **Fibonacci and the Golden Ratio:** The Fibonacci sequence, a famous mathematical pattern, and the golden ratio appear in music, influencing the structure and aesthetics of compositions.



- **The Symmetry of Symphonies:** Symmetry is not just a mathematical concept; it's also an essential element in music composition. Musicians use symmetry to create balance and beauty in their pieces.

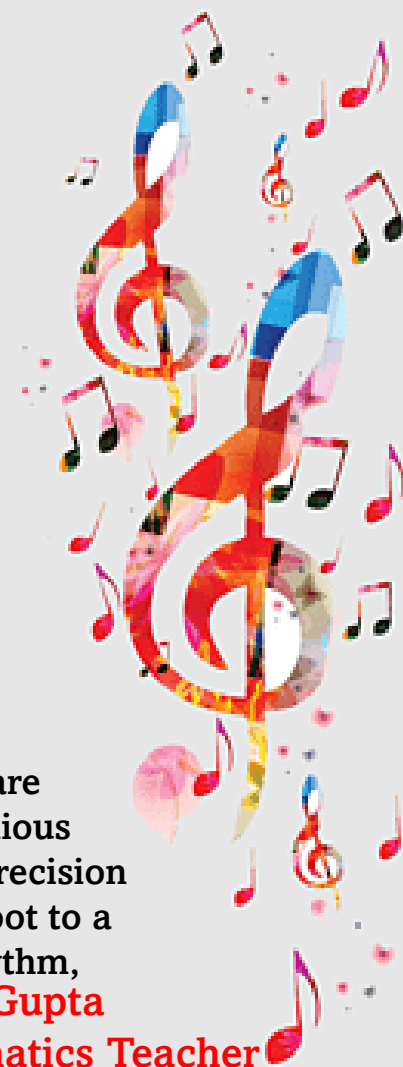
- **The Power of Patterns:** Music often relies on repeating patterns, such as scales and chords. These patterns can be understood through mathematical sequences.

The Role of Math in Modern Music

- **Algorithmic Composition:** How computer algorithms use mathematical rules to generate music.

Mathematics and music may appear as separate subjects in the curriculum, but they share an incredible bond that enriches both disciplines. As we continue to explore the harmonious union of numbers and notes, we gain a deeper appreciation for both the mathematical precision and the artistic magic that underlie the world of music. So, the next time you tap your foot to a catchy tune, remember that you're also engaging in a mathematical journey through rhythm, ratios, and harmonies.

Chesta Gupta
Mathematics Teacher





PARENTS' CORNER

Beauty of Mathematics

Mathematics, the science of structure, order, and relation that has evolved from elemental practices of counting, measuring, and describing the shapes of objects. It deals with logical reasoning and quantitative calculation, and its development has involved an increasing degree of idealization and abstraction of its subject matter.

Mathematics encompasses a wide range of branches, including arithmetic, algebra, statistics and more. It plays a crucial role in science, engineering, economics and many other disciplines, making fundamental tool for solving real-world problems and advancing human knowledge.



For understanding the mathematical concepts, adopting some effective and simple strategies will help the subject more accessible. For instance, Visualizing concepts such as charts, diagrams etc. to understand the concepts and abstract ideas, using real world applications like shopping, budgeting, internet, predicting weather, mathematics provides a foundation to it.

Specific methods and approaches taken to provide students a well-rounded mathematical education that equips them with the skills and knowledge. In that way, Chinmaya Vidyalaya provides a good mathematics environment by implementing practices like challenging problems, puzzles, enrichment activities, explore geometry with art, math projects and so on.

Overall, Mathematics is not just a subject, it is a powerful tool and a universal language that empowers us to tackle a wide range of challenges.

By Mother of Rakshita, 4 A

A close-up photograph of a hand holding a blue pencil, poised to write on a test paper. The paper contains multiple-choice questions with bubbles for answers. The word "ANSWERS" is overlaid in large, white, bold, serif capital letters across the center of the image. The background is softly blurred, showing a white surface with some faint, illegible text and a yellowish object, possibly a book or folder.

ANSWERS

Math Riddles

Ans1- 2 [Inside And Outside].

Ans2- Your Age.

Ans3- All months have 28 days.

Ans4- You're pointless.

Ans5- 0 hours, the barn is already built.

Ans6- Do you want to hear my problems.

Ans7- Only once, because when you subtract 5 from 25, it becomes 20, then 15, etc.

Scratch Your Brain

Ans1- ₹ 4052

Ans2- 1.4 L

Ans3 - approx. 87273

Ans4 – 4.209



Math -O-Riddle

Ans1- 3, because 'six' has three letters

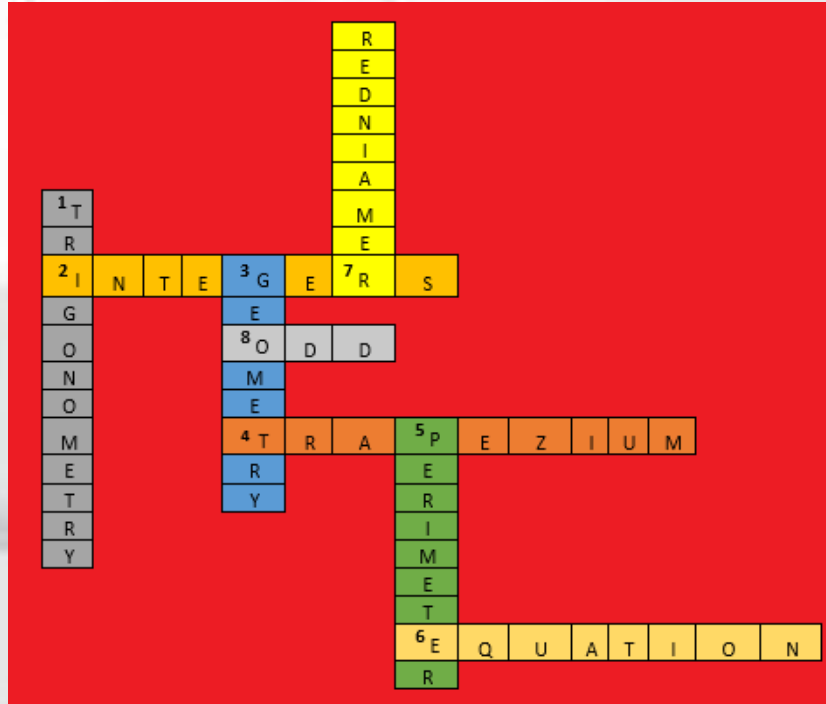
Ans2- 13 Triangles

Ans3 - Seven

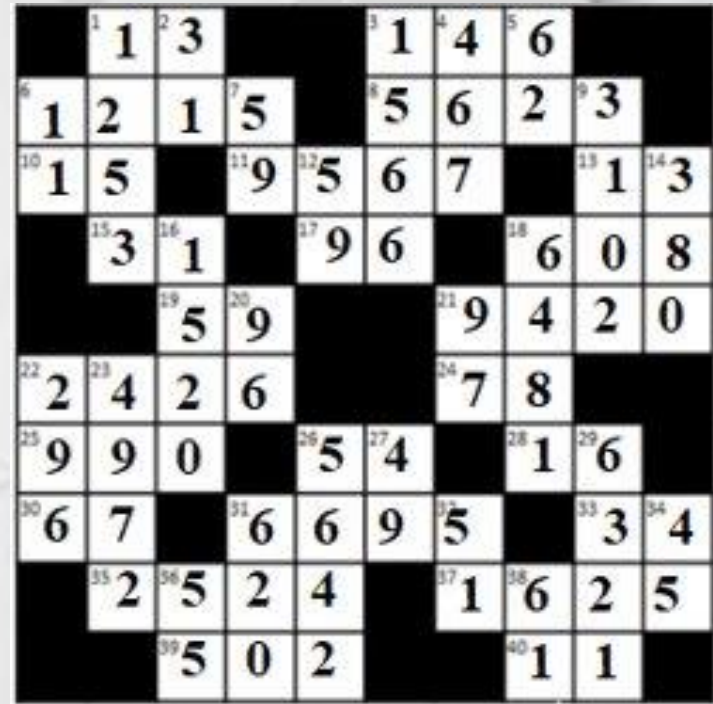
Ans4 – Zero



CROSSWORD



CROSS NUMBER



MY VALUE METER

Do you think you live by your values? Let's test this mathematically.

Please follow the below method for scoring:

For every **YES** give yourself +2 and For every **NO** give yourself -2

I obey the traffic rules.

I switch off the fan if not needed.

I switch off the lights before going out.

I obey my parents and respect my elders.

I always try to conserve water.

I never waste food.

I am kind to animals.

I always throw the garbage in the dustbin.

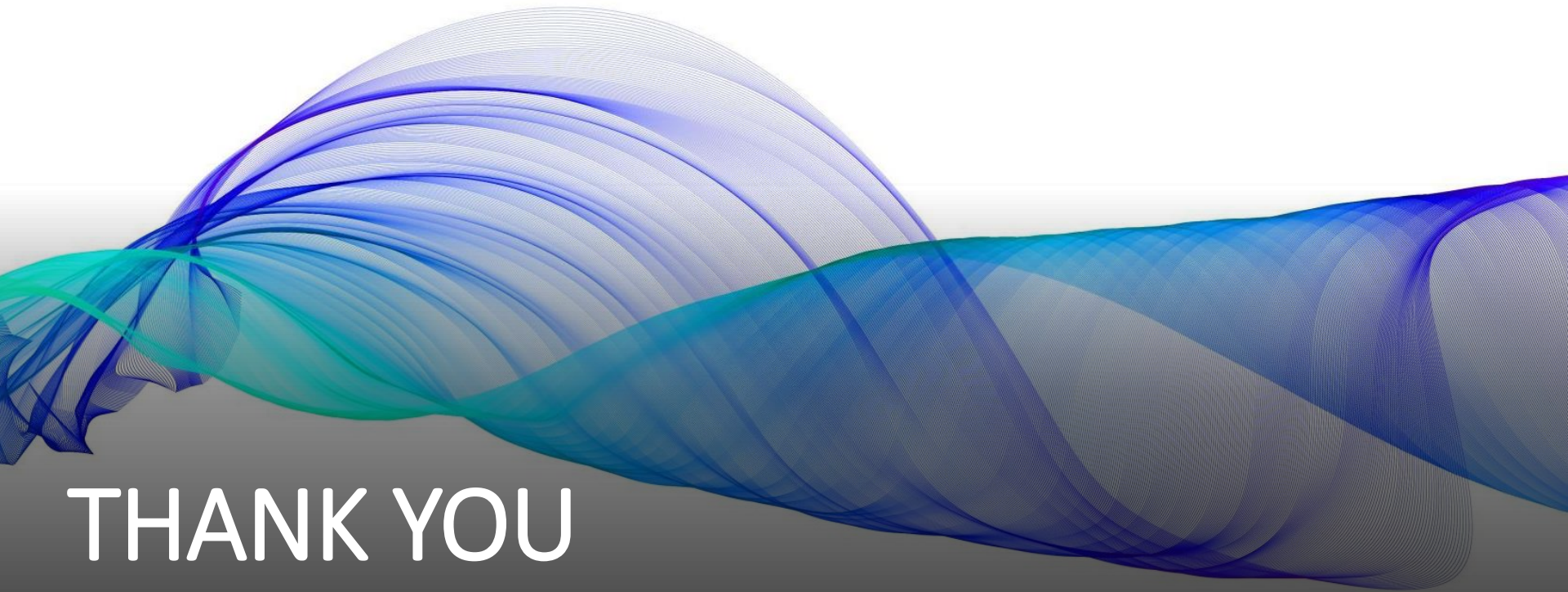
I participate in tree plantation drive.

I participate in any social service activities.

Dear reader, each one of us is unique and you are the best person to assess yourself. It's time to reflect and rework to make the total score positive in becoming the better version of your-self.



Dev Sachdeva
X A



THANK YOU

