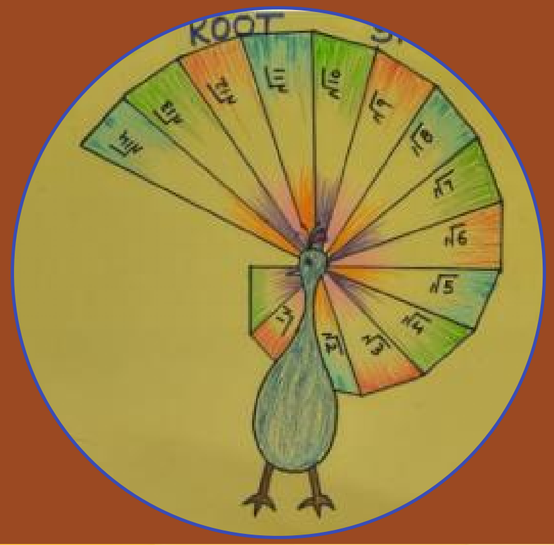
CHINMAYA VIDYALAYA
NEW DELHI

MATHEMATICAL MUSINGS
MATHEMATICS E-NEWSLETTER
OCTOBER- 2024



FROM THE PRINCIPAL'S DESK

Hari Om!

Dear Readers

"Mathematics is the language with which God has written the universe" - Galileo Galilei

I am delighted to introduce the Mathematics E-Newsletter -Mathematical Musings. This E-Newsletter, is a platform which not only provides a 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.

Mathematics is not just about numbers and equations, it teaches us critical thinking, problem-solving, and logical reasoning. These skills are essential in every aspect of life, from making informed decisions to understanding the world around us. The application of Mathematics is everywhere—in Technology, Finance, Science and even Art. By mastering math, we prepare ourselves for a wide range of future opportunities and challenges.

Dear learners, don't be afraid to challenge yourselves. In mathematics, mistakes aren't failures—they're stepping stones to understanding. Keep asking questions, keep exploring and most importantly, keep believing in your ability to grow. The more you engage with Mathematics, the more confident you will become. Let's continue to embrace the beauty and logic 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 to 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

In Mathematics every equation you solve, every formula you master and every problem you tackle adds to your ability to think critically and creatively. The beauty of Mathematics is that it rewards persistence—each new concept builds upon the last and every challenge is an opportunity for growth. Thus, mathematics is a journey and every step—no matter how small—brings us closer to understanding the world in a deeper way.

Keeping this aim in mind, we at Chinmaya Vidyalaya, New Delhi, conduct various activities and competitions at all levels to develop mathematical thinking skills in our students. This helps our learners become familiar with new approaches & methods, enabling them to become good at problem solving & critical thinking.

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.

Let's continue to aim high and embrace the journey of learning, knowing that each step forward brings us closer to understanding the world in new and exciting ways.

Lastly, I would like to applaud the entire dedicated team for the sincere efforts and valuable contribution in making Mathematics learning effective, interesting for our young learners.

Dhiraj Singh Rawat
HOD (Mathematics)

PROUD MOMENTS

For More SCAN ME

Daksh Jamwal secured Third Position in U - 17 Peep Sight Air Rifle Boys Individual in CBSE National Shooting Championship 2024-25

Head Girl – **Harshita Singh** of Class XII – secured First Prize in Lead On - Cliffhanger Competition at Tagore International School Vasant Vihar

Anant Kumar of Class VIII A secured Third Position in the Yoga competition 2024 in U-14 boys category organised by DOE.

Prachi Tokas of class XI secured Gold Medal in The ASBC Asian Junior (boys & girls) International Boxing Championship held At Al Ain City, Abu Dhabi.

Abhishek Kumar Yadav of Class X got selected as one of the top 8 finalists in the regional finals of TCS Inquizitive 2024

In Under-19, **Ishant Singhania** - of class XIC and **Puneet Prakash** of class XA. In Under-17, **Shivansh Singh** of class XIA got selected in the Cricket Trails for zone 20 organised by DOE.

Vaibhav Nikunj, Atharva Rai and **Piyush Prajapati** of Class VIII secured a position in the top 100 in the Youth Ideathon 2024, India's biggest Enterpreneurship organised by Thinkstartup And MEPSC in association with CBSE.

INTER SCHOOL GEETA CHANTING COMPETITION

From 3rd to 5th October 2024, Vidyalaya hosted the 28th Inter-School Bhagavad Gita Chanting Competition, bringing together 1080 students from an impressive 84 schools across Delhi NCR.

NOURISH TO FLOURISH

On 28th October 2024, Vidyalaya hosted 'Nourish to Flourish,' a multi-cuisine cultural fest under the British Council RIDS Activity. Learners from Classes VI to VIII organized this spectacular event, taking attendees on a delightful journey through the diverse cuisines of India, China, Mexico, and Italy.

JOY OF GIVING WEEK

Under Joy of giving Week - With the 'Each One, Donate One' activity, students selflessly collected, packed and donated essential items like dry ration to the Earth Saviours Foundation

For More Details

SCAN ME

ATL

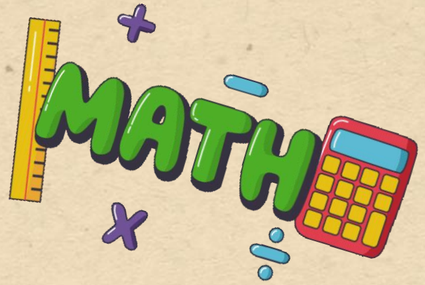
In the ATL learners:

- Built a gas detector using an MQ sensor, an LCD display, and an Arduino
- Created a distance calculator using an ultrasonic sensor, an LCD and an Arduino.

CLUB ACTIVITIES

We celebrate an explosion of clubs during this month for our students-from arts and tech innovators to sports and community service, there's something for everyone.

THE POETRY PRISM



Math: The Ultimate Expedition

In the ocean of math
I am surprised to see the waves
A play of numbers that we see
Answers happening and we feel free
Equations dance with every sway
Walking with us along the way
Through trials and triumphs, we'll find out way
In the ocean of Math, we will play and slay
So, let's take upon this wonderful journey
To find the solution in math's sweet tourney
With each problem solved, our spirit will rise,
In the world of math, adventure never dies!

Ms. Neha Gularia

Math Is Fun

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

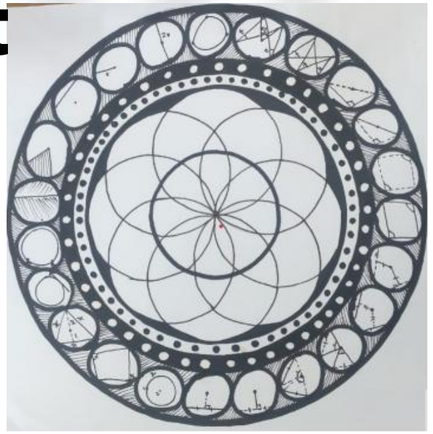
Ananya Anand (VA)

Math Is a Friend

Maths is like a friend that loves to play,
With numbers and shapes in a magical way.
From adding and counting to solving a riddle,
It's a puzzle that keeps us thinking and middle.
Imagine a world where angles can talk,
Where lines and curves take a stroll and walk.
Algebra's like a mystery waiting to be found,
With letters and symbols all spinning around.
Calculus takes us on a wild ride,
Through ups and downs, it's a thrilling slide.
Every equation tells a tale to explore, In the heart of maths, there's always more!

Nazish Pahwa (XI A)

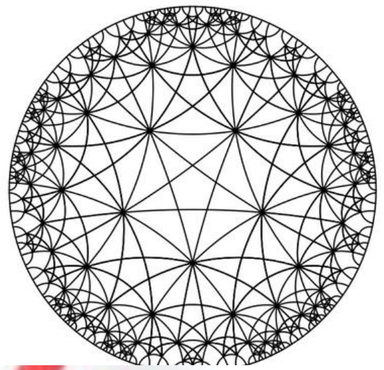
Mathematical Harmony of Mandala Art



Mathematics and art converge beautifully in mandala art, a geometric form traditionally representing the universe in Hinduism and Buddhism. At its core, a mandala is a circle divided into symmetrical patterns, created using intricate geometric shapes. Mathematical concepts such as symmetry, angles, proportions, and geometry are crucial in designing mandalas. Artists often use radial symmetry, where shapes repeat at equal intervals around a center, reflecting balance and harmony. This intertwining of math and art transforms abstract mathematical principles into visually captivating and meaningful artwork, making mathematical patterns more tangible and accessible.

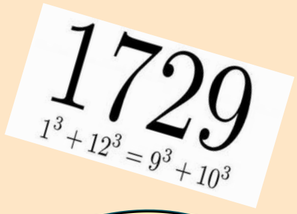
Uses and Benefits of Mandala Art

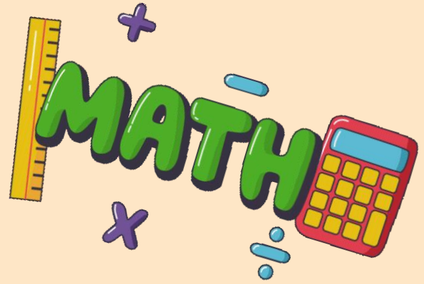
Mandala art is widely used in mindfulness practices, meditation, and stress relief. Creating or coloring a mandala promotes concentration, patience, and creativity, providing a calming experience that helps reduce anxiety and enhance focus. Many therapists incorporate mandala drawing or coloring as a therapeutic tool for emotional healing and mental clarity. It also nurtures self-expression and mindfulness, encouraging individuals to connect with their inner selves. Moreover, mandalas are aesthetically appealing and often used in interior design to promote a peaceful and balanced environment, making them a versatile art form with profound psychological and spiritual benefits.



Saanvi Virmani (VII C)

DO YOU KNOW?





1. The word “hundred” comes from the old Nurse term, “hundrath”, which actually means 120 and not 100.

2. From 0 to 1000, the only number that has the letter “a” in it is “one thousand”.
6. The symbol for division (i.e.÷) is called an obelus.

3. Zillion is just an informal term to address an enormous or indefinite number. Zillion isn’t actually a number.

Sanvi Singh (V B)

Ramanujan’s Numbers

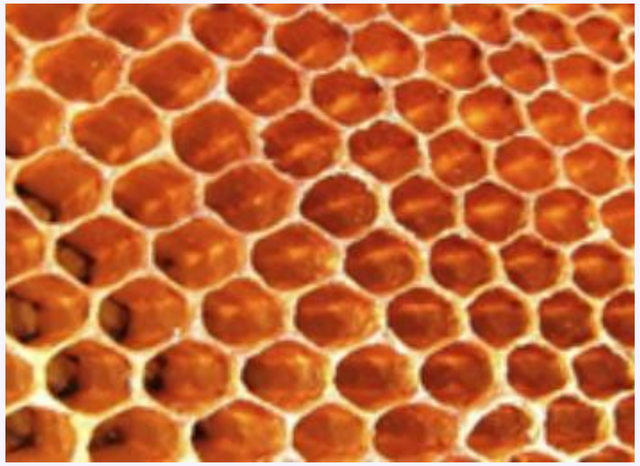
Indian mathematician Srinivasa Ramanujan discovered many unusual properties of numbers, including the famous “taxicab number,” 1729, which is the smallest number expressible as the sum of two cubes in two different ways.

Transcendental numbers

They are a special class of real or complex numbers that are not roots of any non-zero polynomial equation with rational coefficients.
Eg. 1.618...or 3.145

Tessellations

These are patterns formed by fitting shapes together without any gaps or overlaps. They are found in honeycombs, art, and architecture.



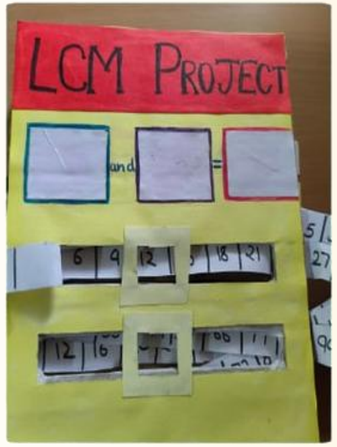
Honey Comb shows tessellation using repeating hexagonal shapes.

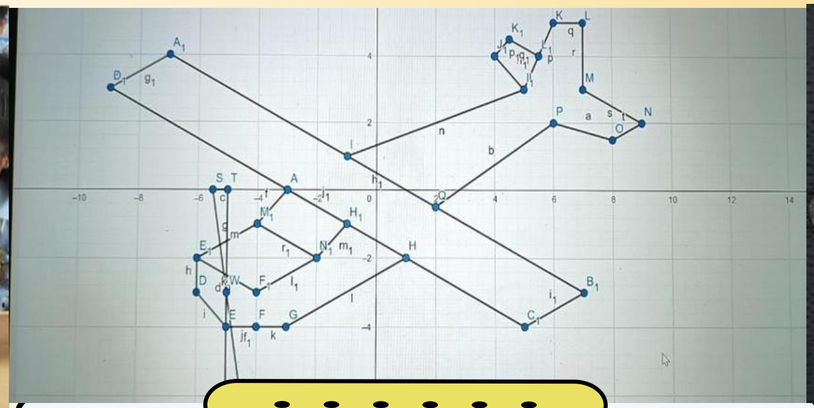
Aahana S.R. (IX A)

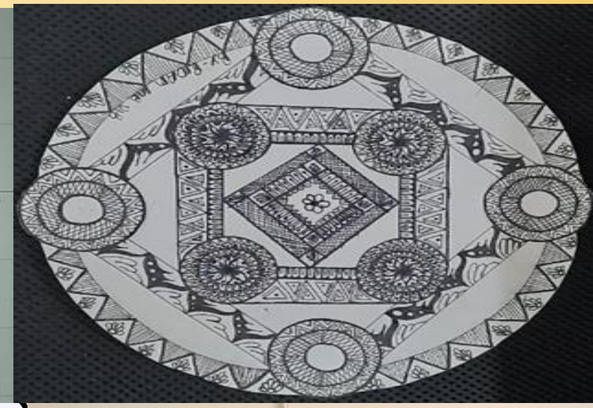
Neelakanta Bhanu Prakash - a human calculator from Hyderabad, India, is titled as the "World's Fastest Human Calculator".He won gold in the 2020 Mental Calculation World Championship at Mind Sports Olympiad 2020

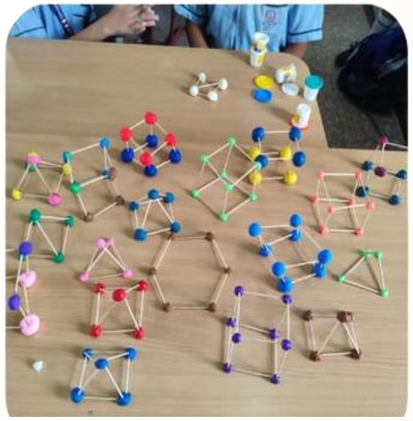
MATHARTISTICS

ARTISTIC MINDS AT WORK

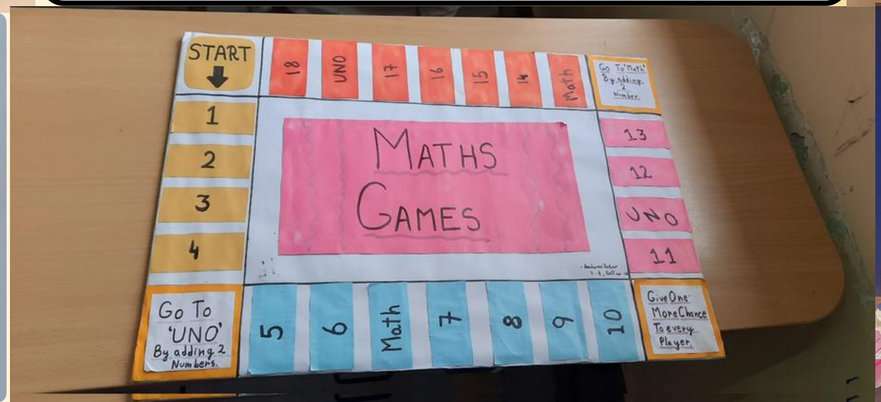






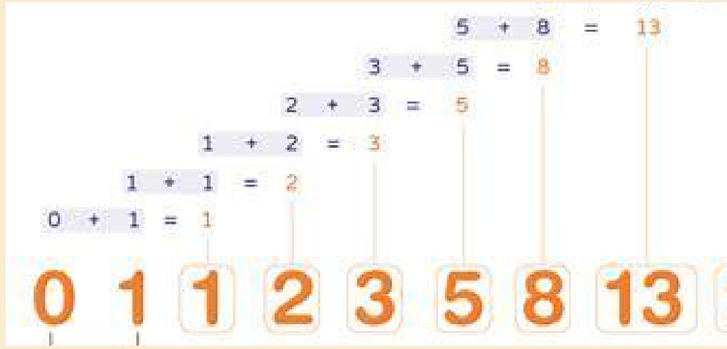


Art and mathematics may seem like an unlikely pair, but together they unlock a world of creativity and deep learning. Through art integration, students visualize complex mathematical concepts, fostering a hands-on approach to problem-solving.



THE BEAUTY OF THE FIBONACCI SEQUENCE IN NATURE

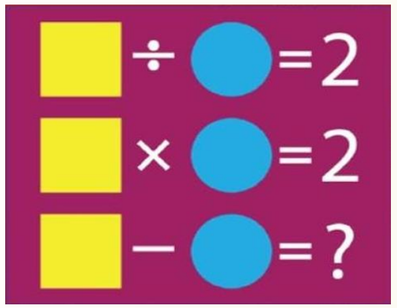
The Fibonacci sequence is a series of numbers where each number is the sum of the two preceding ones, starting from 0 and 1. Mathematically, it looks like this: 0,1,1,2,3,5,8,13,21,34,55,89,...
This sequence is not just a mathematical curiosity but is found in many aspects of nature, art, and architecture. One of the most fascinating applications is in nature. The arrangement of leaves, the pattern of petals in flowers, and the spirals of shells often follow the Fibonacci sequence. For instance, if you count the number of petals on a flower, you might find that it's often a Fibonacci number—like 3 petals on lilies, 5 petals on buttercups, or 21 petals on daisies.
Moreover, Fibonacci numbers appear in the way tree branches grow. This natural growth process follows a pattern that optimizes sunlight exposure, helping the plant grow efficiently. Seashells also exhibit spiral patterns that align with the Fibonacci sequence, creating a balance of symmetry and growth that we find visually appealing.
The relationship between the Fibonacci sequence and the golden ratio, approximately 1.618, also explains why this pattern is so common in nature. As you progress along the Fibonacci sequence, the ratio between consecutive numbers approaches the golden ratio, a proportion that seems to govern beauty in both art and nature.
So, the next time you marvel at the beauty of nature, remember—you're witnessing mathematics at work!



Tanay Prasad (XIIA)

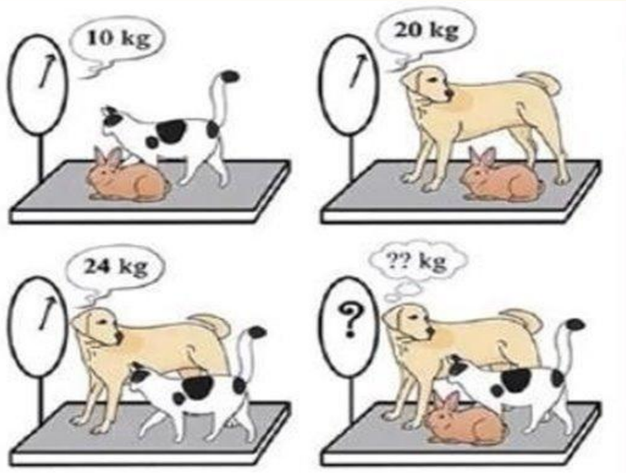
RIDDLES AND PUZZLES

1 CAN YOU FIND OUT ?



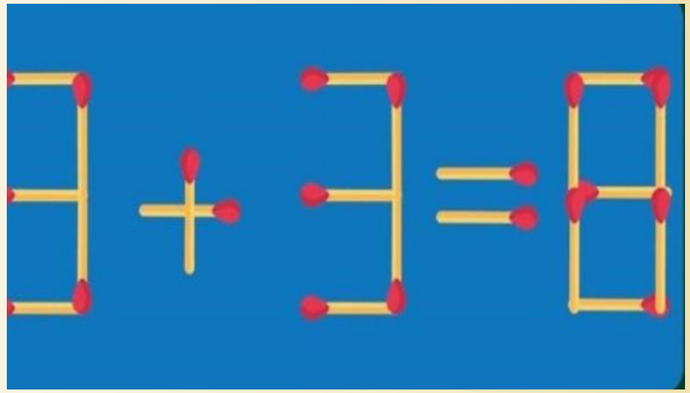
Shariq Alam (XIA)

2 FIND THE FOURTH ONE



Shariq Alam (XIA)

3 MOVE TWO MATCHSTICKS AND MAKE THE EQUATION CORRECT



Shariq Alam (XIA)

4

I have no beginning and no end.
I'm always growing, but never changing.
I'm the same everywhere, but different for everyone.
What am I ?

Utkarsh Bharati (XI A)

5

There are seven people at a party. They meet each other and each of them shakes hands only once with each of the others. How many handshakes will be there in total?

Udbhav (V B)

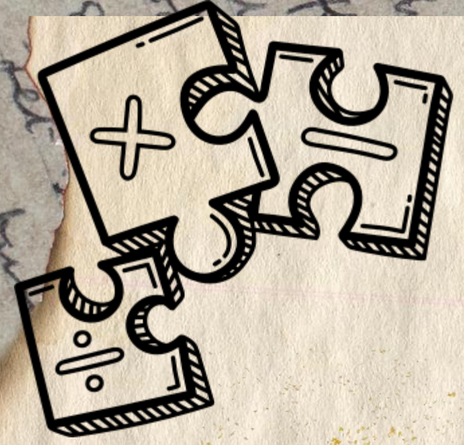
6

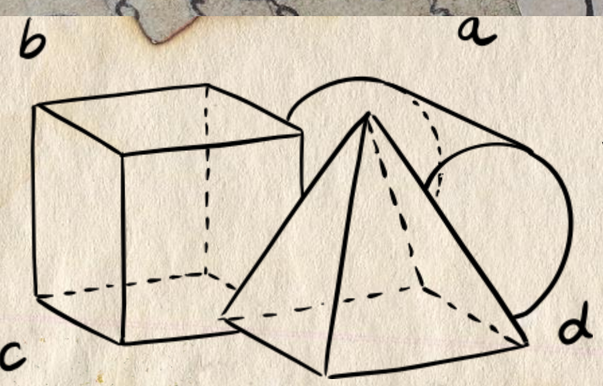
Use only eight eights to get one thousand.

Udbhav (V B)

For Answers

SCAN ME

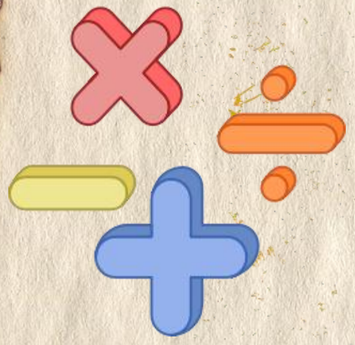


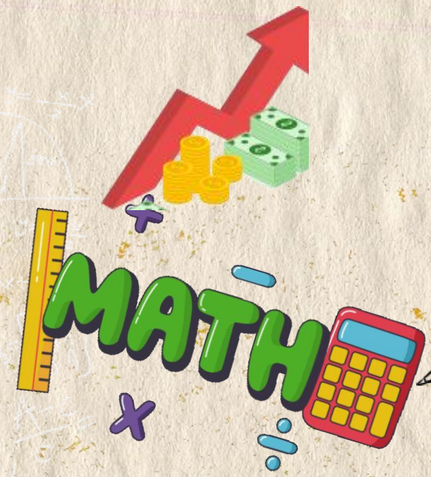


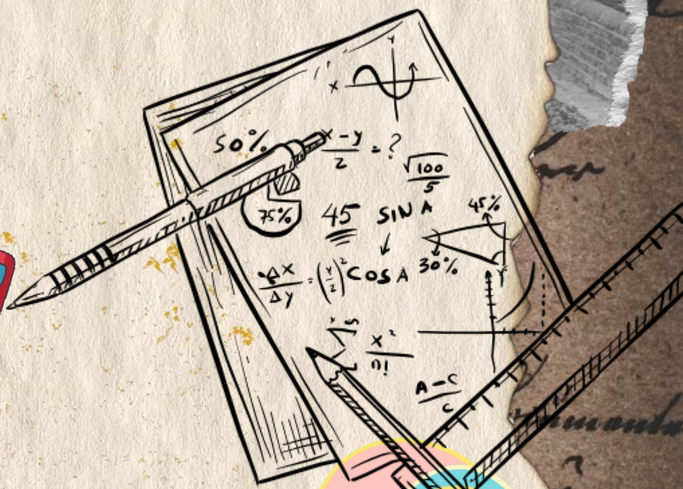
For More Vidyalaya Activities

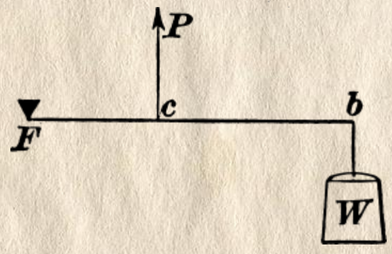
SCAN ME

Thank You









$$(a+b)^2 = a^2 + 2ab + b^2$$