SIGMA

2023-24

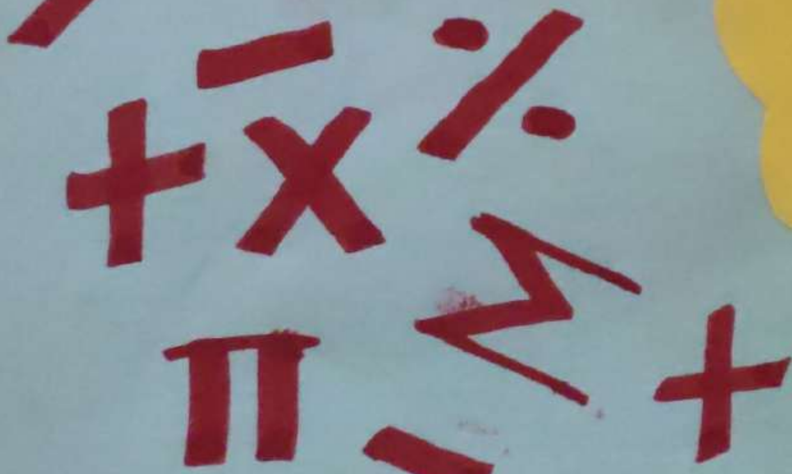
EDITORIAL

"യഥാ ശിഖാ മയൂരാണാം നാഗാനാം മണയോ യഥാ-
തദ് വദ് വേദാംഗശാസ്ത്രാണാം ഗണിതം മൂർദ്ധനിസ്ഥിതം".

അതായത്, മയിലിന് അതിന്റെ ശിരസ്സിലെ ശിഖപോലെ, നാഗത്തിന് അതിന്റെ ഫണത്തിലെ നാഗമാണിക്യം പോലെ വേദാംഗങ്ങളായ ശാസ്ത്രങ്ങളുടെ മൂർദ്ധാവിലാണ് ഗണിതശാസ്ത്രത്തിന്റെ സ്ഥാനം. നൂറ്റാണ്ടുകൾക്ക് മുന്നേ തന്നെ ഗണിതത്തിന്റെ പ്രാധാന്യവും മഹത്വവും വേദങ്ങളിൽ വരെ പ്രതിപാദിച്ചിട്ടുണ്ടെന്ന് വ്യക്തമാണ്. മാറിവരുന്ന നമ്മുടെ ദൈനംദിന ജീവിതത്തിലും ശാസ്ത്രലോകത്തും ഗണിതശാസ്ത്രം ചെലുത്തിയ സ്വാധീനം തിരിച്ചറിയിക്കാനും, കൂടാതെ ഗണിതശാസ്ത്രത്തിലെ ചില മായാജാലങ്ങളെ പരിചയപ്പെടുത്തിക്കൊണ്ടും ആണ് 'സിഗ്മ 2023-2024' എന്ന മാഗസിൻ നിങ്ങളിലേക്ക് എത്തുന്നത്.

ഏതു പ്രവർത്തനങ്ങളിലും പൂർണ്ണപിൻതുണയും പ്രോത്സാഹനവും നൽകുന്ന ബഹു. പ്രിൻസിപ്പാൾ ജെസ്സി മാം, മാഗസിൻ പ്രവർത്തനങ്ങളിൽ മാർഗ്ഗദർശിനിയായി നിന്ന അധ്യാപിക ഡോ. ഷോളി ടീച്ചർ കൂടാതെ, സിഗ്മയുടെ ഓരോ താളിലും തന്റേതായ വ്യക്തിമുദ്ര പതിപ്പിച്ച മാത്സ് വിഭാഗം അധ്യാപക വിദ്യാർത്ഥികൾ എല്ലാവർക്കും എന്റെ ഹൃദയം നിറഞ്ഞ നന്ദി രേഖപ്പെടുത്തുന്നു.

NIVEDITHA K.V
SUB-EDITOR
DEPARTMENT OF MATHEMATICS
P.K.M College of Education,
Madampam.



FELICITATION

2023-25 Batch ഗണിതവിഭാഗം
തയ്യാറാക്കിയിരിക്കുന്ന ക്ലാസ് മാഗസിൻ
'സിഗ്മ'ക്ക് ആശംസകൾ നേരുന്നു. ഗണിത-
പഠനം രസകരവും വിജ്ഞാനപ്രദവുമാക്കാൻ
കുട്ടികളെ സഹായിക്കാൻ പരിശീലനം നേടുന്ന-
അധ്യാപക-വിദ്യാർത്ഥികളുടെ സർഗാത്മകതയുടെ
പ്രകടിതരൂപമായി 'സിഗ്മ' ശോഭിക്കുന്നു.
അധ്യാപകപരിശീലന ആദ്യഘട്ടത്തിൽ തന്നെ കൂട്ടായ
ചിന്തയും ആവിഷ്കാര വൈവിധ്യ ശോഭയും 'സിഗ്മ-2023'
ന്റെ തിളക്കം വർദ്ധിപ്പിക്കുന്നു. അധ്യാപക-വിദ്യാർത്ഥികൾക്ക്
മാർഗ്ഗദർശനം നൽകിയ ബഹു. ഡോ. ഷോളി ജോസഫിനും
പ്രിയ വിദ്യാർത്ഥികൾക്കും അഭിനന്ദനങ്ങൾ...
നന്മകൾ നേരുന്നു.

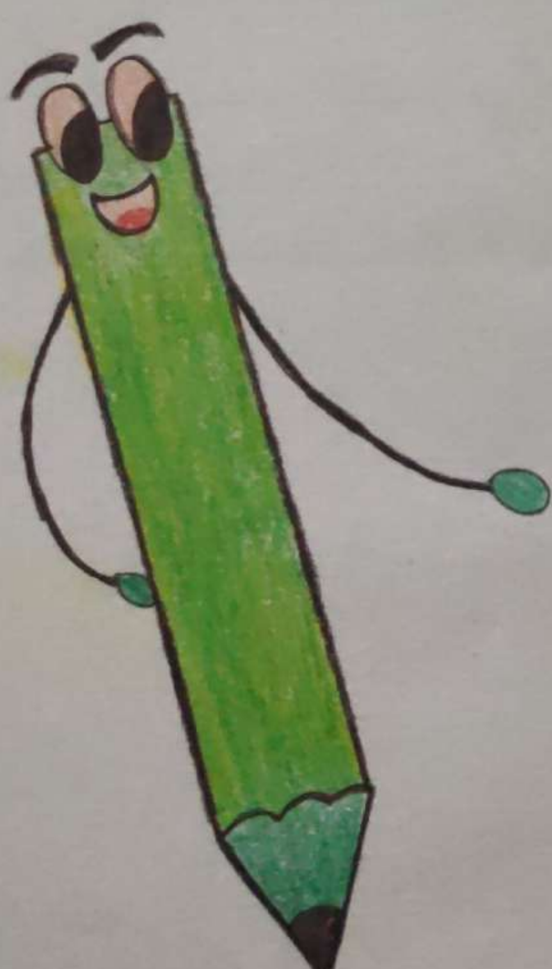
ഡോ. ജെസ്സി എൻ.സി
പ്രിൻസിപ്പാൾ
പി.കെ.എം കോളേജ്
ഓഫ് എഡ്യുക്കേഷൻ, മടമ്പം.

FELICITATION

Dear all,

It is pleasure and ecstacy to see that this batch of students have another edition of "Sigma". Usually people will think that a mathematician is not having imagination and literal gifts. This is really a proof to show that even mathematicians can have literal creations. congratulations to all of you for having such a nice work. I wish in the future, you will have more creations in your life.

All the best wishes.



Dr. Sholy Joseph .K
(CHIEF EDITOR)
ASSISTANT PROFESSOR
DEPARTMENT OF MATHEMATICS
P.K.M College of Education,
Madampam.

CHIEF EDITOR

Dr. SHOLY JOSEPH K
Asst. Prof. Mathematics
PKM college of Education,
Madampam.

SUB EDITOR

NIVEDITHA K.V
Student Teacher
Department of Mathematics
P.K.M college of Education,
Madampam.

ASSOCIATE EDITORS

MITHUNA. C. NAIR

NANDHANA DAS

ANJANA SURESH

ANUSREE ANIL

ASWIN BABURAJ

KAVYA K

NIJIL SANS

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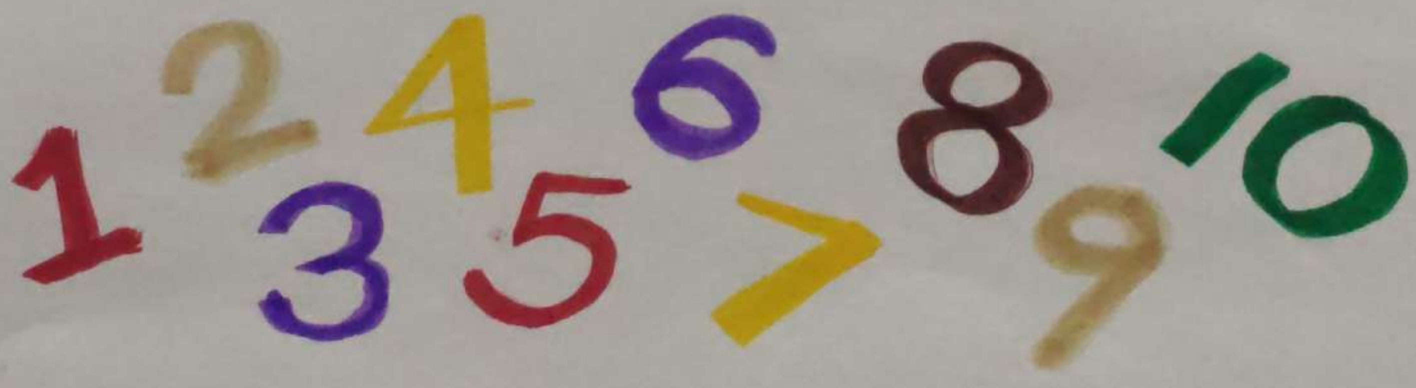


Early Numeration Systems

THE EGYPTIAN NUMERATION SYSTEM

In mathematics, symbols that are used to represent numbers are called **numerals**. A number can be represented by many different numerals. For instance, the concept of "eightness" is represented by, each of the following.

Hindu-Arabic : 8 Tally : 卌 ||| Roman : VIII

chinese : 八 Egyptian : |||||||| Babylonian : 𒁹𒁹𒁹𒁹𒁹𒁹𒁹𒁹

A numeration system consists of a set of numerals and a method of arranging the numerals to represent numbers. The numeration system that most people use today is known as the Hindu-Arabic numeration system. It makes use of 10 numerals; 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

The Egyptian numeration system uses pictorial sysmbols called - " Hieroglyphics " as numerals.

The Egyptian hieroglyphics system is an additive system because any given number is written by using numerals whose sum equals the - number. Below table gives the Egyptian hiearoglyphics for powers of 10 from 1 to 1 million.

Hindu-Arabic numeral	Egyptian hieroglyphic	Description of hieroglyphic
1	𓏺	stroke
10	𓎆	Heel bone
100	𓍢	scroll
1000	𓆼	lotus flower
10,000	𓂭	pointing-finger
100,000	𓆐	Fish
1,000,000	𓁨	astonished person

To Write the number 300, the Egyptian wrote the scroll hieroglyphic 3 times. 𓍢𓍢𓍢. In Egyptian hieroglyphic system, the order of hieroglyphics is of no importance. Each of the following four Egyptian numerals represents 321.

𓍢𓍢𓍢𓎆𓎆𓏺,

𓎆𓎆𓍢𓏺𓍢𓍢, 𓏺 𓎆𓎆 𓍢𓍢𓍢

𓍢𓏺𓎆𓍢𓎆𓍢,

NIVEDITHA K.V

ORIGIN OF GRAPH THEORY

The Origins of graph theory can be traced back to the 18th Centuarry when the Swiss mathematician Leonhard Euler made a Pioneering Contribution. Euler is often Credited with laying the foundation for graph theory in his 1736 Paper titled "Solution of a problem Connected with the Bridges of Königsberg." In this paper, Euler addressed a practical Problem Related to the City of Königsberg (Now Kaliningrad, Russia), which had seven bridges connecting two Islands and the mainland. Euler approached this Problem by abstracting it into a mathematical representation, introducing the Concepts of nodes (vertices) and edges to create a graph. His insights and Solution to the problem not only resolved the Königsberg bridge Conundrum but also established the fundamental principles of graph theorg.

Euler's work marked the beginning of formal graph theory, and his Pioneering ideas paved the way for Subsequent developments in the field. Graph theory has since grown into a rich area of mathematics with applications across various domains, including Computer science, Social network analysis, operations research, and more. The Simplicity of Euler's original Problem and the elegance of his Solution Continue to inspire mathematicians and Scientists, emphasizing the enduring Significance of the origin of Graph theory.

KAVYA K

The Monty Hall problem

The Monty Hall problem is a probability puzzle named after the host of the American television game show "Let's Make a Deal", Monty Hall. The problem can be stated as follows:

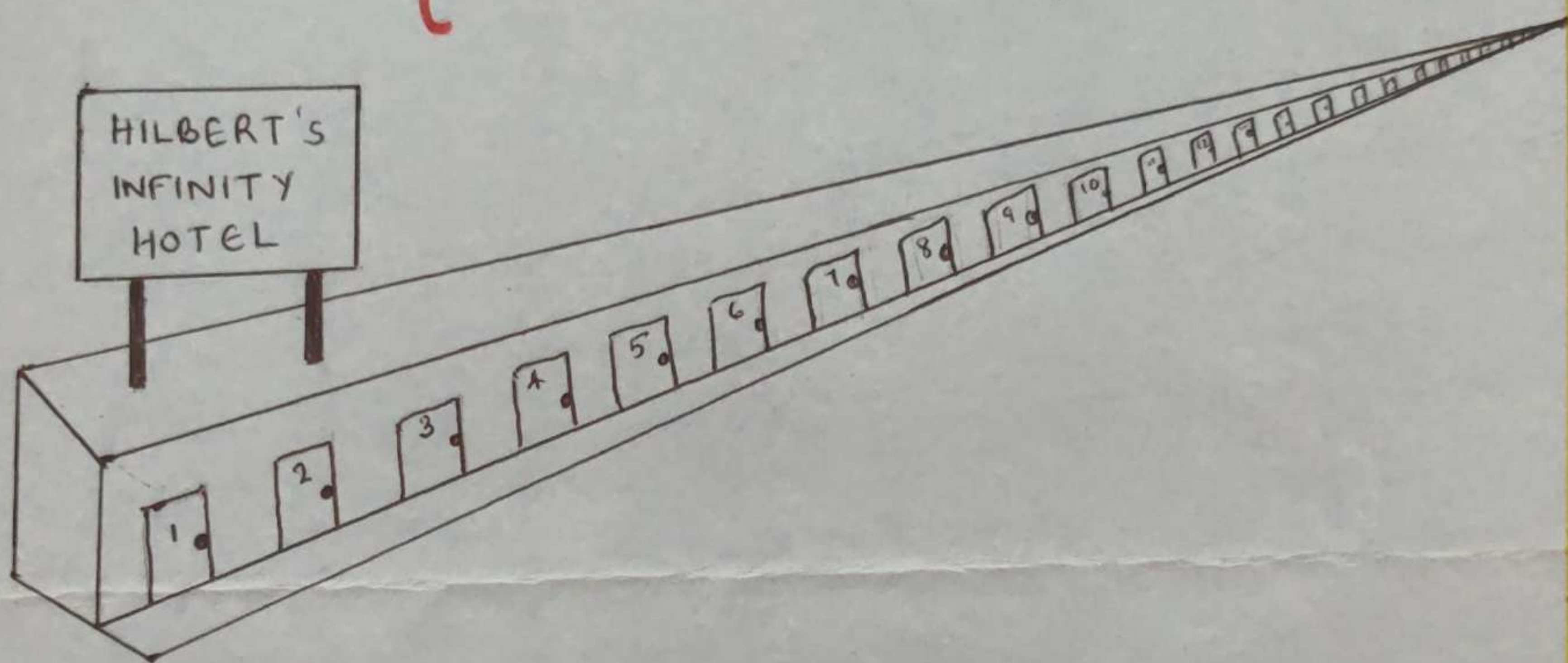
You are a contestant on a game show. There are three doors infront of you, and behind one of them is a valuable prize (e.g, a car), while behind the other two are less desirable prizes (e.g, goats). You choose one of the three doors, but you don't open it yet.

Now, the host, Monty Hall, who knows what's behind each door, opens one of the other two doors that you didn't choose, revealing a less desirable prize. Monty then gives you the option to either stick with your original choice or switch to the other unopened door. What should you do to maximize your chances of winning the valuable prize?

The counterintuitive answer is that you should always switch doors to maximize your chances of winning. By switching, you have a 2/3 chance of winning, while sticking with your original choice only gives you a 1/3 chance. This can be explained using conditional probability and is a classic example of a counterintuitive result in probability theory.

ASWIN BABURAJ

Hilbert's Paradox of the Grand Hotel



Hilbert's infinity hotel is a famous thought experiment in mathematics and philosophy that was proposed by the German mathematician David Hilbert in 1924. It is often used to illustrate the counterintuitive properties of infinite sets and to challenge our intuition about infinity.

The scenario of Hilbert's infinity Hotel goes like this:

Imagine a hotel with an infinite number of rooms each labeled with a +ve integer (1, 2, 3, 4...). The hotel is fully occupied, with a guest in every room. Now, a new guest arrives at the hotel and asks for a room. At first, it might seem impossible to accommodate the new guest because all the rooms are already occupied. However, because we're dealing with infinity, Hilbert's Infinity Hotel has some unusual features:

The Receptionist shuffles guests: He can ask each current guest to move to the room with the number that is one more than their current room. For eg: the guest in room 1 moves to room 2, the guest in room2 moves to room 3 and so on. This frees up the first room for the new guest.

Infinite rooms are available: No matter how many new guests arrive (even infinitely many), the hotel can always accommodate them all. For eg: if an infinite bus full of new guests arrives, the receptionist can ask each current guest to move to the room with a number that is double their current room number. For eg: the guest in room 1 moves to room 2, the guest in room 2 moves to room 4 and so on. This frees up all the odd numbered rooms for the new guest.

There is no last room: Despite having infinitely many rooms, there is no "last" room in the hotel. You can keep adding guests, and the hotel will always have infinitely many rooms available

Hilbert's infinity hotel illustrates some of the paradoxical and counterintuitive aspects of infinity, challenging our everyday understanding of finite quantities. It demonstrates that infinite sets do not behave in the same way as finite sets and they can lead to surprising and counterintuitive results in mathematics and philosophy.

ANJANA SURESH

THE INFINITE CANVAS

Upon the canvas of Numbers and lines,
Mathematics weaves its intricate designs,
A world of Abstraction where Beauty resides,
In formulas and patterns, the mind takes its strides.
From Euclidean spaces to Fractal's embrace,
Math paints its pictures in every case.
Topology's twists, in surfaces and bends,
Like a puzzle, it challenges, never truly ends.
Number theory, the realm of primes,
In their solitary elegance, it climbs.
Abstract algebra's structures, groups and Rings,
Symmetry and transformations, math's offerings.
In this endless expanse of Mathematical Grace,
we find inspiration in every Mathematical place.
On the canvas infinite, our minds are free,
To explore the wonders of Mathematics.

ANUSREE ANIL

1729

In 1918, Indian mathematician Srinivas Ramanujan was admitted the hospital in London, where he was visited by his colleague and long-time friend G.H. Hardy. The fellow mathematician had arrived in a taxi which was numbered '1729' and had thought about it on his way to the room, Hardy blurted "It was rather a dull number," after a brief hello.

When Ramanujan came to know of the number, the mathematician said "No Hardy, it is a very interesting number. It is the smallest number expressible as the sum of two cubes in two different ways." This conversation, which is the base of the mysterious Hardy-Ramanujan number is documented in his biography 'The man who knew infinity' by Robert Knaigel.

The Mystery of Ramanujan Number.

Ramanujan explained that 1729 is the only number that is the sum of cubes of two different pairs numbers: 12^3+1^3, and 10^3+9^3.

It was not a sudden calculation for Ramanujan. According to his biography, "years before, he had observed this little arithmetic morsel, recorded it in his notebook and, with that easy intimacy with numbers that was his trademark, remembered it."

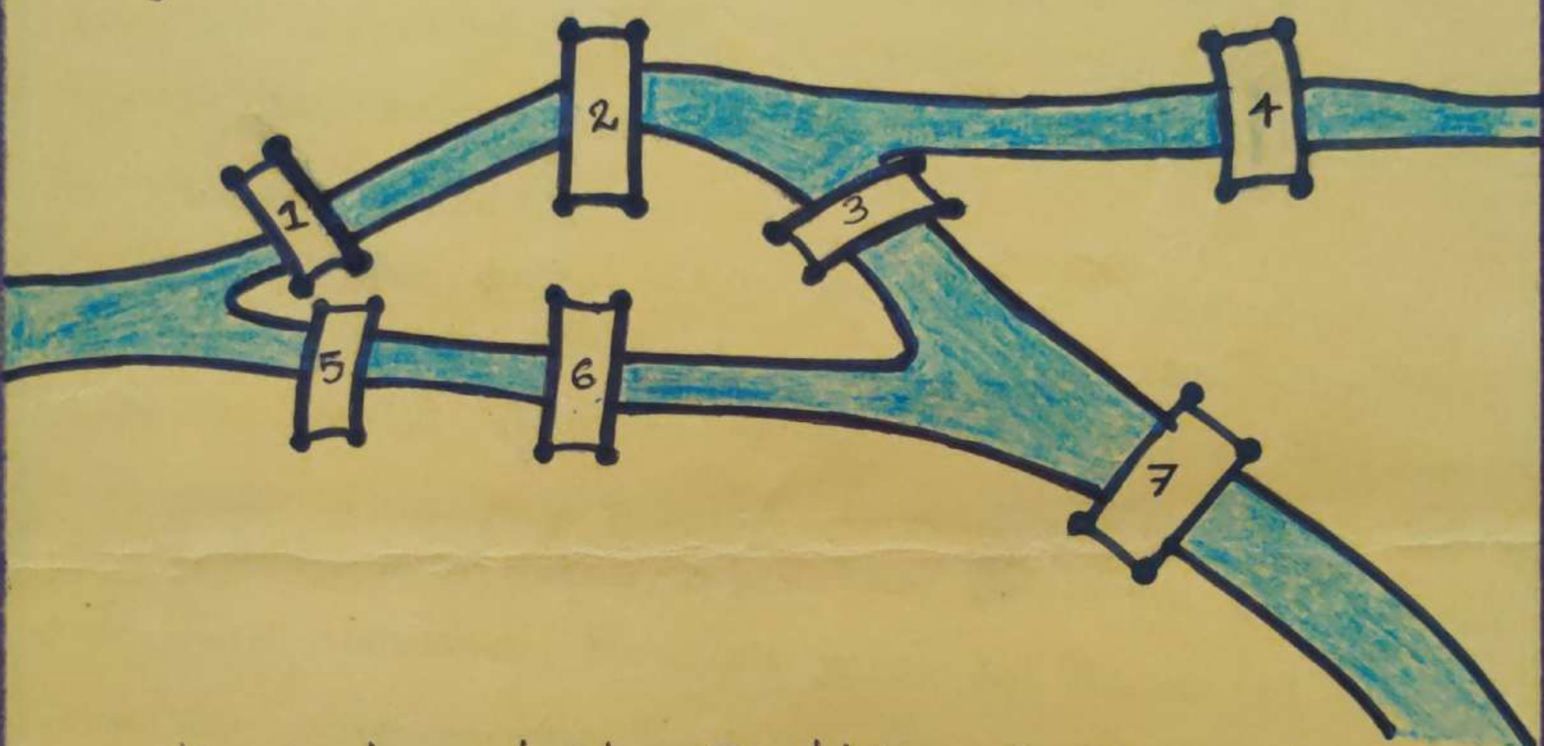
The unique number later came to be known as the

'Hardy-Ramanujan Number.'

MITHUNA C NAIR

KÖNIGSBERG BRIDGE PROBLEM

Bridges of königsberg.



Konigsberg bridge problem, a recreational mathematical puzzle, set in the old prussian city of Königs berg (Now kaliningrad, Russia), that led to the development of the branches of mathematics known as topology and graph theory. In the early 18th century, the citizens of königsberg spent their days walking on the intricate arrangement of bridges across the waters of the pregel (Pregolya) River, which surrounded two central landmasses connected by a bridge (3). Additionally, the first land mass (as island) was connected by two bridges

(5 & 6) to the lower bank of the pregel and also by two bridges (1 & 2) to the upper bank, while the other land mass (which split the pregel into two branches) was connected to the lower bank by one bridge (7) and to the upper bank by one bridge (4), for a total of seven bridges. According to folklore, the question arose of whether a citizen could take a walk through the town in such a way that each bridge would be crossed exactly once.

In 1735 the Swiss mathematician Leonhard Euler presented a solution of this problem, concluding that such a walk was impossible. To confirm this, suppose that such a walk is possible. In a single encounter with a specific landmass, other than the initial or terminal one, two different bridges must be accounted for: one for entering the landmass and one for leaving it. Thus, each such landmass must serve as an endpoint of a number of bridges equaling twice the number of times it is encountered during the walk. Therefore, each landmass, with the possible exception of the initial and terminal ones if they are not identical, must serve as an endpoint of an even number of bridges. However, for the landmasses of Königsberg, A is an endpoint of five bridges, and B, C, and D are end points of three bridges. The walk is therefore impossible.

It would be nearly 150 years before mathematicians would picture the Königsberg bridge problem as a graph consisting of nodes (vertices) representing the land masses and arcs (edges) representing the bridges. The degree of a vertex of a graph specifies the number of edges incident to it. In modern graph theory, an Eulerian path traverses each edge of a graph once and only once. Thus, Euler's assertion that graph possessing such a path has at most two vertices of odd degree was the first theorem in graph theory.

KAVYA K

KENKEN PUZZLES

Kenken is an arithmetic based logic puzzle that was invented by the Japanese mathematics teacher 'Tetsuya Miyamoto' in 2004. The noun 'ken' has knowledge and awareness as synonyms. Hence, kenken translates as knowledge squared or awareness squared.

In the recent years of the popularity of kenken has incresed at a dramatic rate. It is similiar to sudoku puzzle, but they also require you to perforn arithmetic to solve the puzzle.

Rules for solving a kenken puzzle

- For an nxn puzzle, fill in each square of the grid with one of the numbers 1, 2, ..., n. Grids range in size of the puzzle from a 3x3 upto 9x9.
- Don't repeat a number in any row/column.
- The numbers in each heavily outlined set of squares, called cages must combine (in some order) to produce the target number – in the top left corner of the cage. Using mathematical operations indicated.
- cages with just one square should be filled in with the target number.
- A number canbe repeated with in a cage as long as It is not in the same ~~orde~~ row/column.

Here is a 4x4 kenken puzzle. and It's solution.

6x		7+	
	2	8x	
4x	12x		1-
		1	

A 4by4 puzzle with 8 cages.

2	1	3	4
3	2	4	1
1	4	2	3
4	3	1	2

The solution to the puzzle.

NIVEDITHA K·V

Fibonacci in nature

If we observe the nature, we must admit that nature is the best mathematician we ever seen. And one of its best works is the Fibonacci sequence. The Fibonacci sequence is a series of numbers where each number is the sum of the two preceding ones, typically starting with 0 and 1. This seemingly abstract mathematical concept has a profound presence in the natural world, manifesting itself in the shapes and structures of various organisms and natural phenomena.

At the heart of the connection between Fibonacci and nature lies the golden ratio, often denoted by the Greek letter phi (φ). This irrational number, approximately equal to 1.61803398875, is derived from the Fibonacci sequence. As the sequence progresses, the ratio of consecutive Fibonacci numbers approaches the golden ratio.

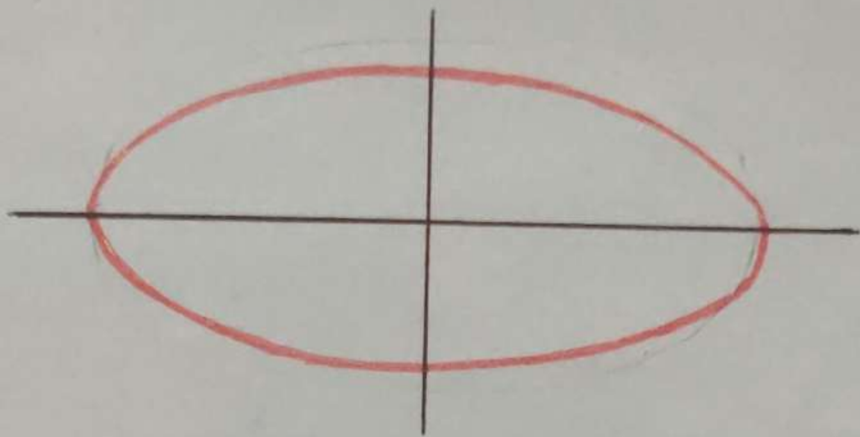
The golden ratio has captivated artists, architects, and mathematicians for centuaries due to its aesthetic appeal. It is believed to represent a sense of beauty and balance. Interestingly, this ratio appears in various aspects of the nature.

We can see the presence of Fibonacci sequence in nature. Many flowers exhibit petal counts that correspond to Fibonacci numbers. The spirals on pinecones and pineapples follow the Fibonacci sequence. The number of clockwise and counterclockwise spirals in sunflower seeds often corresponds to consecutive Fibonacci numbers. The spirals of certain seashells, the shapes of hurricanes and some spiral galaxies resemble the Fibonacci spiral. The next time you see all these things, take a moment to appreciate the hidden Fibonacci patterns that nature has woven into its fabric.

ASWIN BABURAJ

LITHOTRIPSY

A Medical Application of Ellipse.



The Ellipse is a very special wo and practical conic section. In mathematics an ellipse is a curve in a plane surrounding two focal points such that the sum of the distance of two focal points is constant for every point on the curve, As such It is a generalization of a circle Which is a special type of an ellipse having both focal points at the same location.

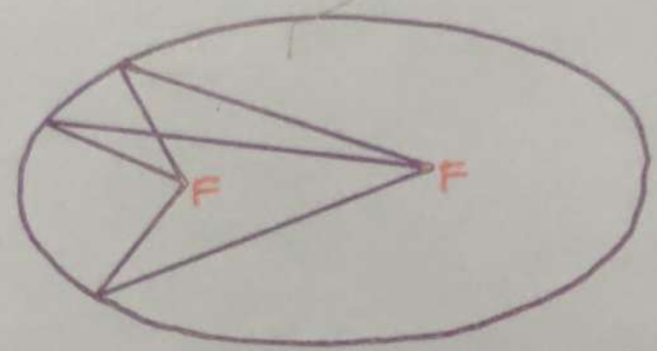
Properties :

- one important property of the ellipse is It's reflexive.
- If you think of an ellipse as being made from a reflexive material then a light ray emitted from one focus will reflect off the ellipse and pass through the second focus.
- This is also true not only for light rays but also for other forms of energy, including shock waves. Shock waves generated at one focus will reflect off the ellipse and pass through the second focus.
- This characteristic, unique upto ellipse has inspired a useful medical application.

Lithotripsy : A treatment, typically using ultrasound shock waves, by Which a kidney stone or other calculus is broken into small particles that can be passed out by the body.

It is an easy, effective way of treating kidney stones and uses the reflective property of an ellipse. If an energy wave is emitted from one focus of an ellipse. It will pass through the second focus.

Lithotripter: A Lithotripter is an instrument which uses shockwaves to successfully shatter a painful kidney stone (or gallstone) into tiny pieces that can be easily passed by the body. This process is known as Lithotripsy.



The Lithotripter machine has a half ellipsoid shaped piece that rests opening to the patients side. An ellipsoid is a ~~tree~~ three dimensional representation of all ellipse. In order for the Lithotripter to work using the reflexive property of the ellipse, the patients stone must be at one focus points of the ellipsoid and the shock waves generator at the second focus.

The patient is laid on the table and moved into position next to the Lithotripter. Doctor uses a ~~Litho~~ fluoroscopic x-ray system to maintain a visual of the stone. This allows for the accurate positioning of the stone as a focus.

ANJANA SURESH

FRACTALS

Fractals :- Endlessly Repeated Geometric Figures.

In 1970s, the mathematician Benoit Mandelbrot discovered some remarkable methods that enable us to create - Geometric figures with a specific property ; If any portion of the figure is enlarged repeatedly, then the additional details (not fewer details, as with the enlargement of a photograph) of the figure are displayed. Mandelbrot called these endlessly repeat-ed geometric figures fractals. At the present time, there is no universal agreement on the presicise definition of fractal, but we can also defined it as " Fractal is a geometric figure in which a self-similar motif repeats itself on an ever-diminishing scale.

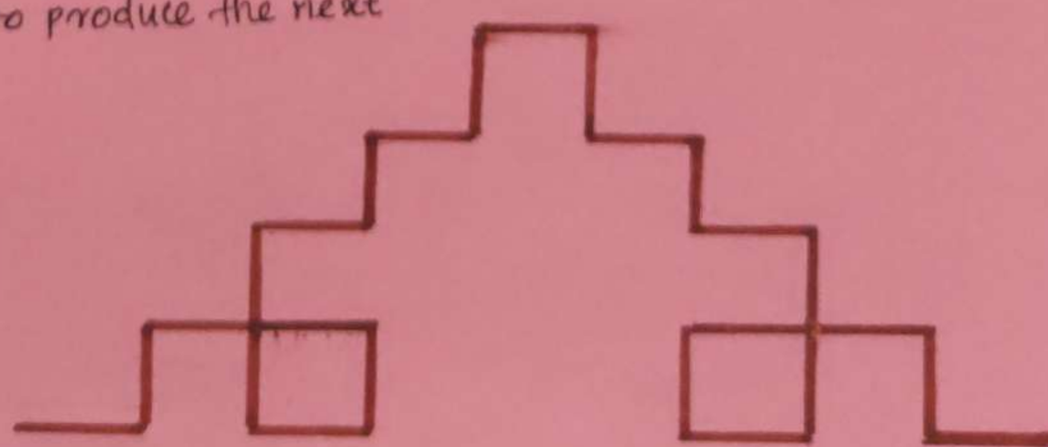
DRAW STAGES OF FRACTAL

Eg 1 : BOX CURVE

stage 0 : start with a line segment as the initiator.

stage 1 : On the middle third of the line segment, draw a square and remove It's base. This produce a generator of the box-curve.

stage 2 : Repeat each initiator shape with a scaled version of the - generator to produce the next stage.



NIVEDITHA B-V

EXPLORING THE BEAUTY OF PRIME NUMBERS

Prime numbers have fascinated mathematicians for centuries, and their allure remains as strong as ever. While these numbers have many practical applications, such as in cryptography, their inherent beauty lies in their pure Mathematical form. Prime numbers are the building blocks of arithemetic, & they continue to reveal surprising patterns & mysteries to Mathematicians. From the distribution of Primes, as explored in the Riemann Hypothesis, to the Goldbach Conjecture's enigmatic statement about expressing even numbers as the sum of two primes, there is a wealth of unsolved questions waiting to be unraveled. More over, prime numbers have connections to other branches of mathematics, like number theory and algebra, making them a central topic in the mathematical landscape. Recent breakthroughs, such as progress in the twin Prime conjecture and the existence of infinitely many primes in arithemetic progressions, highlight the on-going vitality of prime number research. Prime numbers may seem simple, but they continue to spark the imagination of mathematicians. Prime numbers stand as a test ment to the beauty and depth of mathematics. Their profound simplicity & yet unresolved complexity ensure that the study of prime numbers will remain a vibrant & essential field in mathematics for generations to come.

Prime numbers are fascinating! They are natural numbers greater than 1 that are divisible only by 1 and themselves. Some prime numbers, like 2, 3, 5 and 7, are quite small, while others like 13, 17, and 19, are larger. prime numbers have unique properties and play a crucial role in number theory and cryptography. They are like the building blocks of the natural numbers, and their distribution in the number line is a topic of ongoing research. Mathematicians have been exploring the mysteries and patterns with in prime numbers for centuries, making them a captivating area of study.

The beauty of prime numbers lies in their unpredictability. There is no simple formula to generate all prime numbers, and they are appear seemingly at random intervals. The Riemann Hypothesis, one of the most famous unsolved problems in mathematics, is directly related to the distribution of prime numbers along the number line. Prime numbers also have practical applications such as in encryption algorithms like RSA (Rivest-Shamir-Adleman), which rely on the difficulty of factoring large composite numbers into their prime components. As we continue to explore prime numbers, we uncover deep mathematical connections and discover new primes of unimaginable size, continuing to unravel the intricate tapestry of these unique mathematical entities.

KAVYA K

MATH RIDDLES

1. If you multiply all the numbers on the phone. what will your answer be?

   Zero

2. How many times can you subtract 10 from 50?

   only once.

3. Which one is heavier? A pound of rock or a pound of cotton?

   They both Weigh the Same.

4. A chicken was given ₹10, A spider was given ₹40. An Ant was given ₹30. How much would a dog get?

   The dog will get ₹20 (₹5 for each leg)

5. You have 2 cows, 2 birds, and 1 cat How many legs do you have?

   Two legs

MITHUNA C NAIR

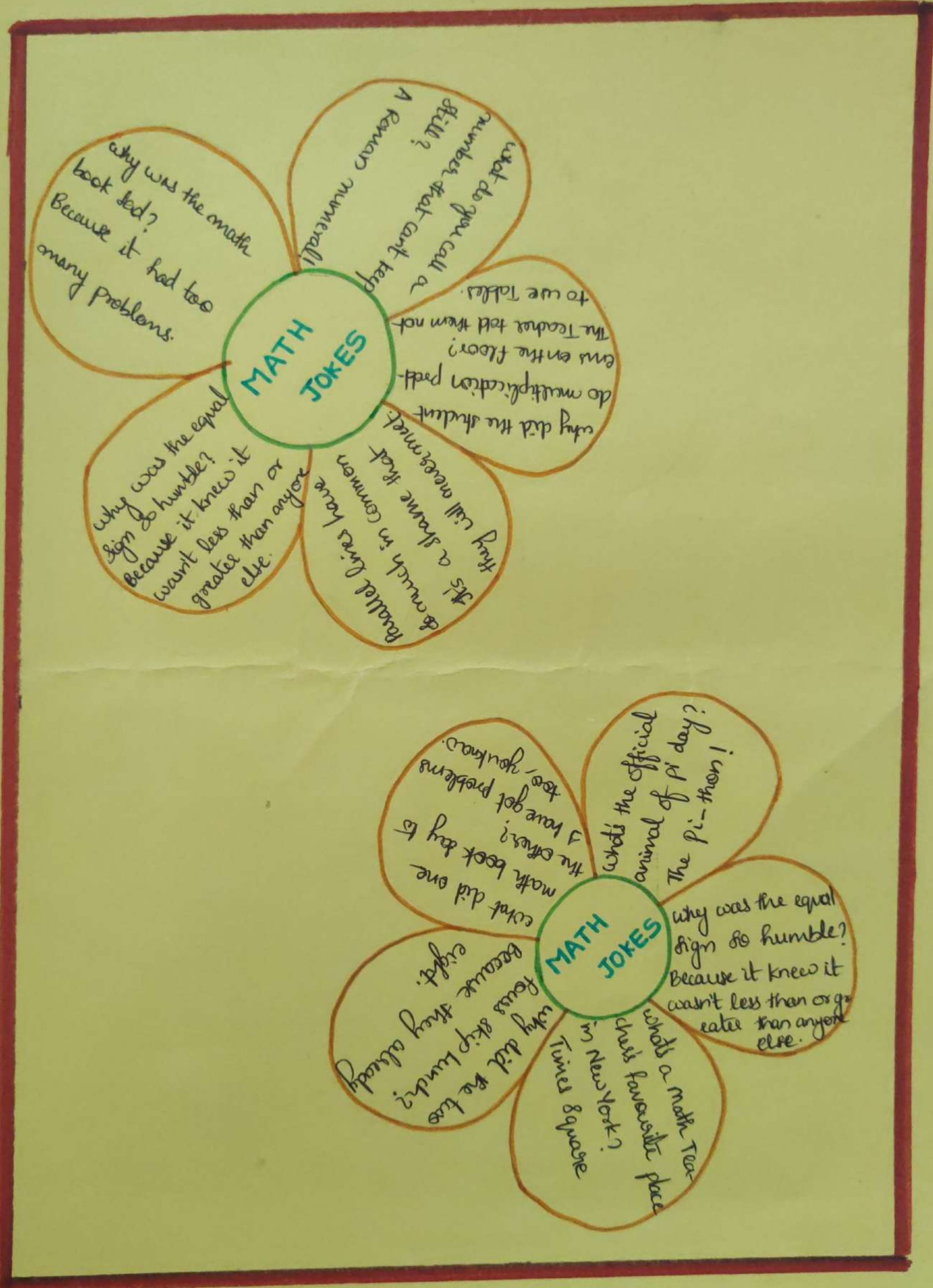
No Nobel for Mathematics

Alfred Nobel's last will stated that his fortune is used to create a series of prizes for those whose contributions in the fields of physics, chemistry, physiology or medicine, literature, and peace were the "greatest benefit to man kind." However, no Nobel prize was designated for mathematics. There are various speculations on the possible reasons for this exclusion. Some of them are worth going through.

It is often discussed that Nobel found Maths too theoretical. Since he believed that only practical inventions or discoveries could benefit mankind, he might have disregarded this subject whose practical applications are often obscure. The other (& the more dramatic) theory is an unfounded one. Rumours have it that Nobel disliked a contemporary Mathematician, Gosta Mittag-Leffler, with whom his partner allegedly cheated him. This made him detest the subject too and moreover, he didn't wish Leffler to win this prize. The other reason can be linked with an already existing Math award. King Oscar II of Sweden and Norway had already established a prestigious award for Mathematicians and Nobel felt that instead of duplicating it, other fields should be given their due.

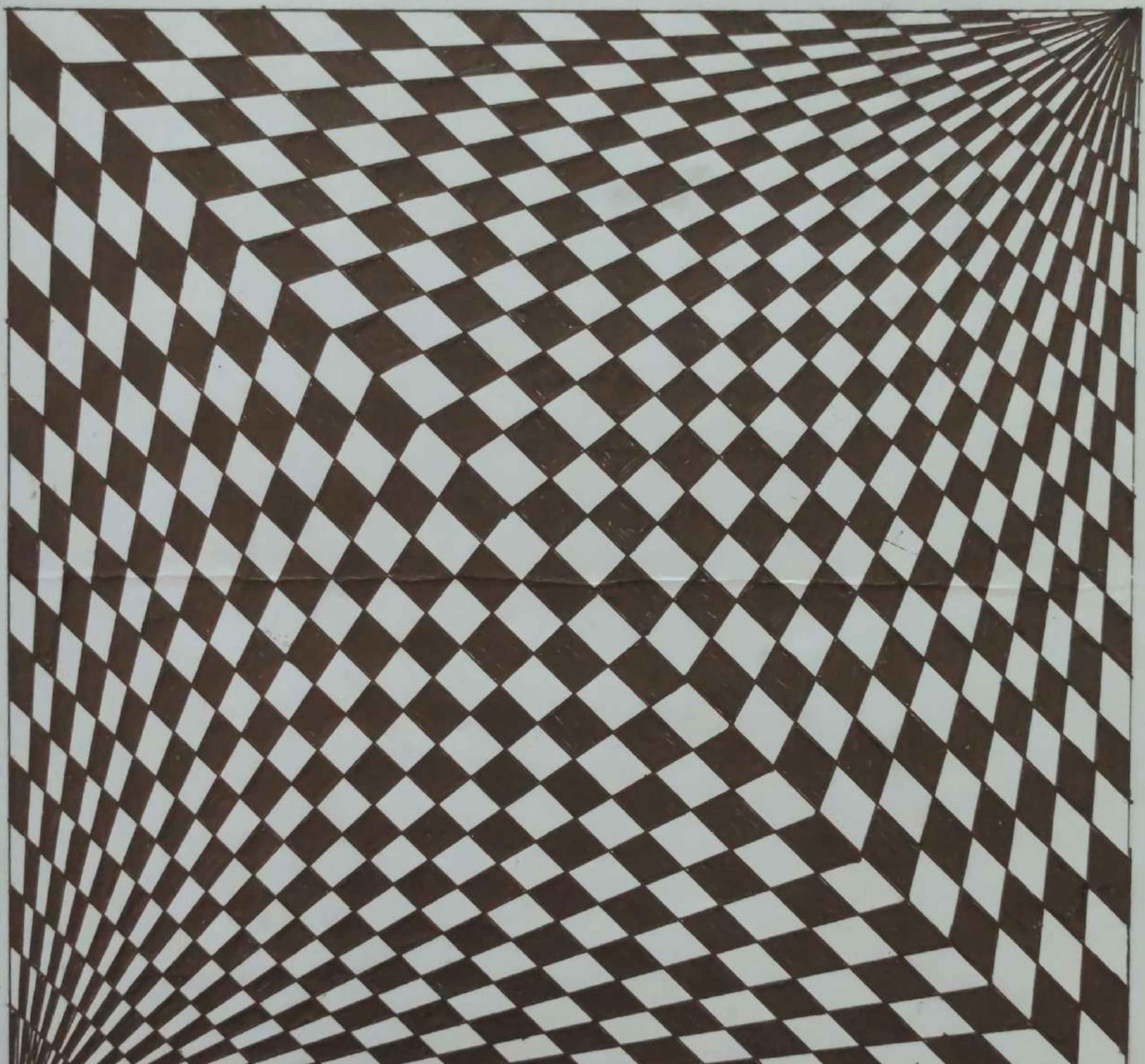
What ever the reason be, there is no Nobel prize in Mathematics. However, there is another prestigious award which is considered a parallel to the Nobel. It is the Abel Prize. It was proposed by a Norwegian Mathematician Sophus Lie when he learned that Nobel had omitted Mathematics in his series of awards.

KAVYA K



ANUSREE ANIL

ASWIN BABURAJ



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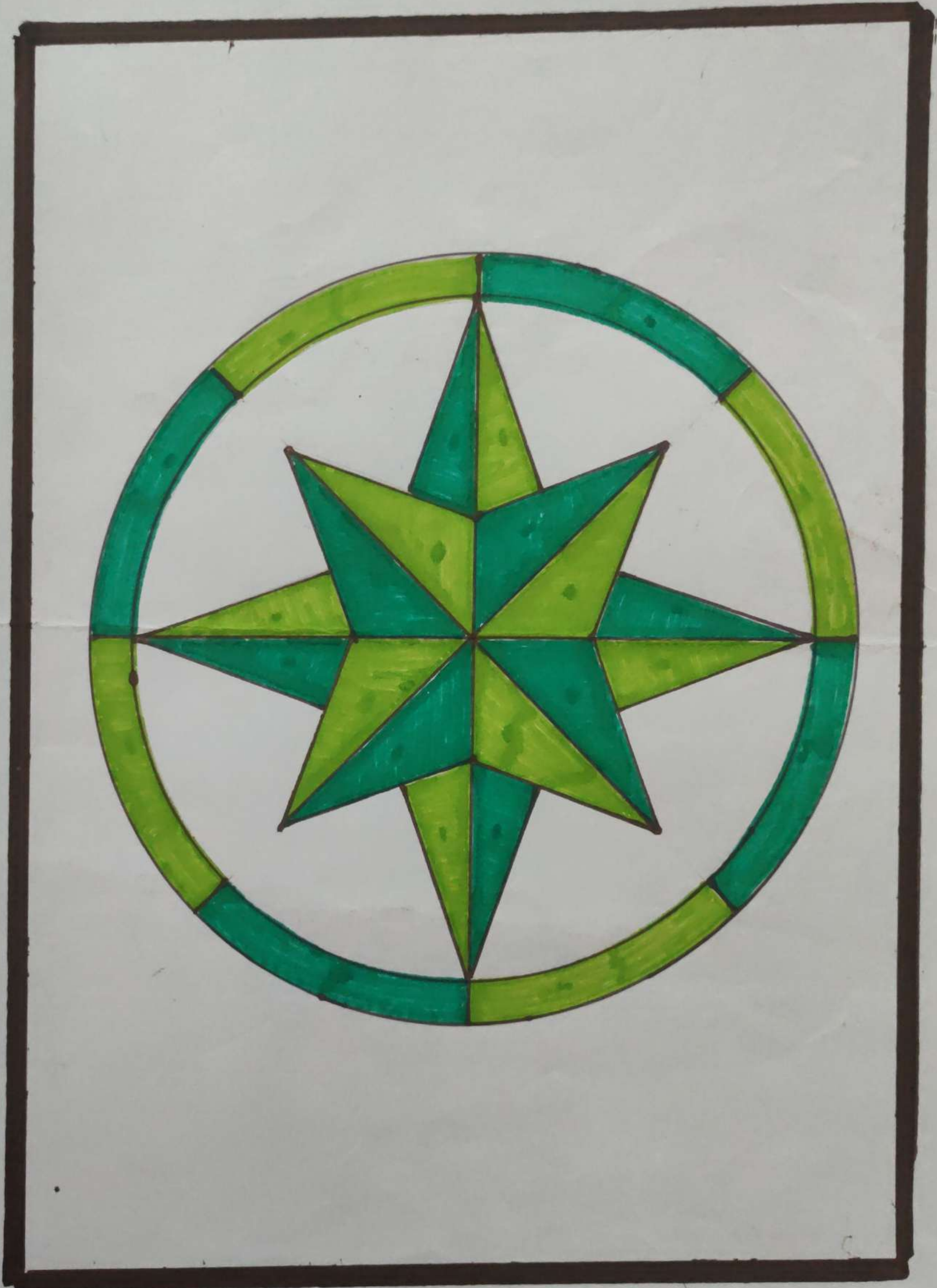

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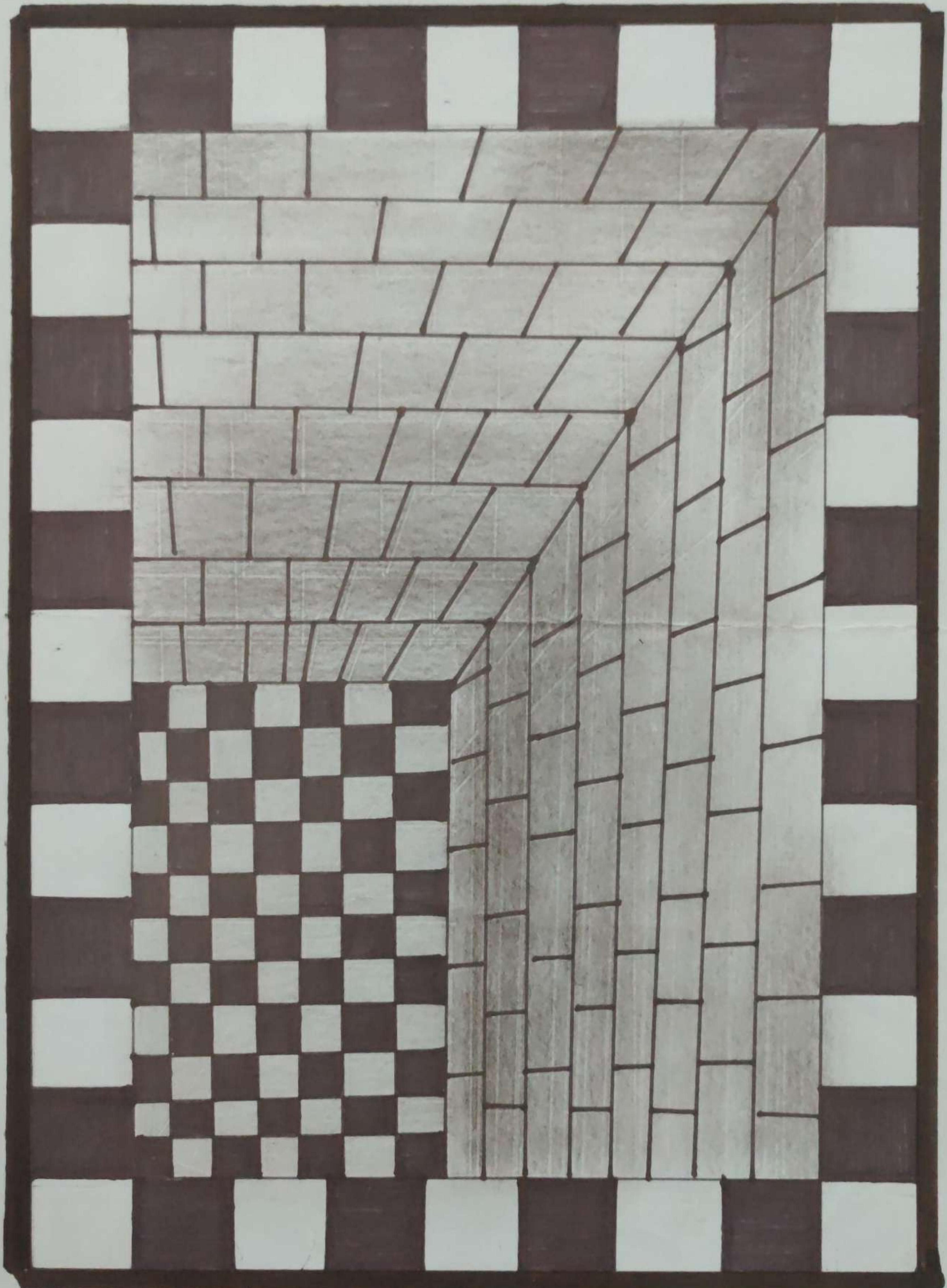

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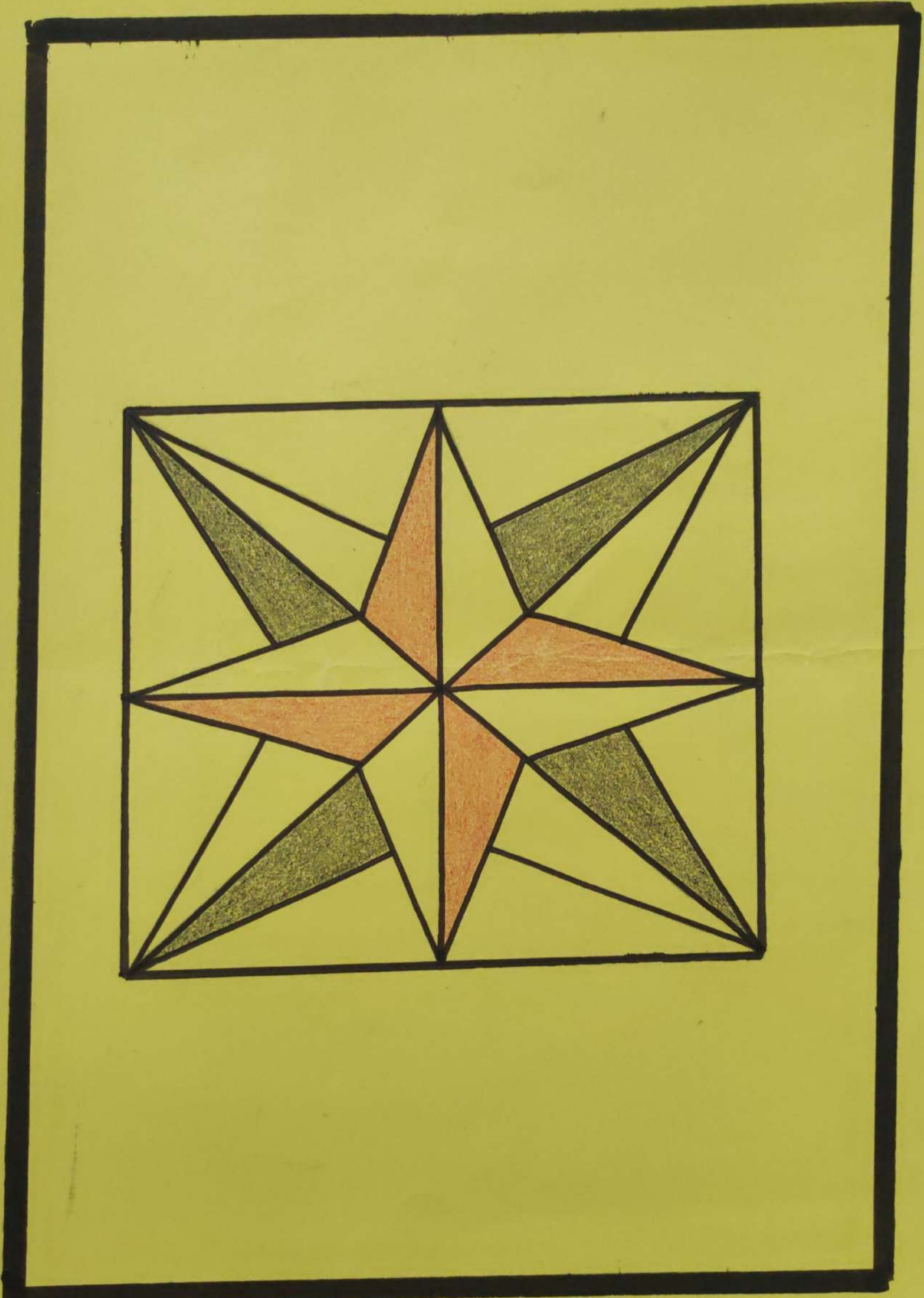

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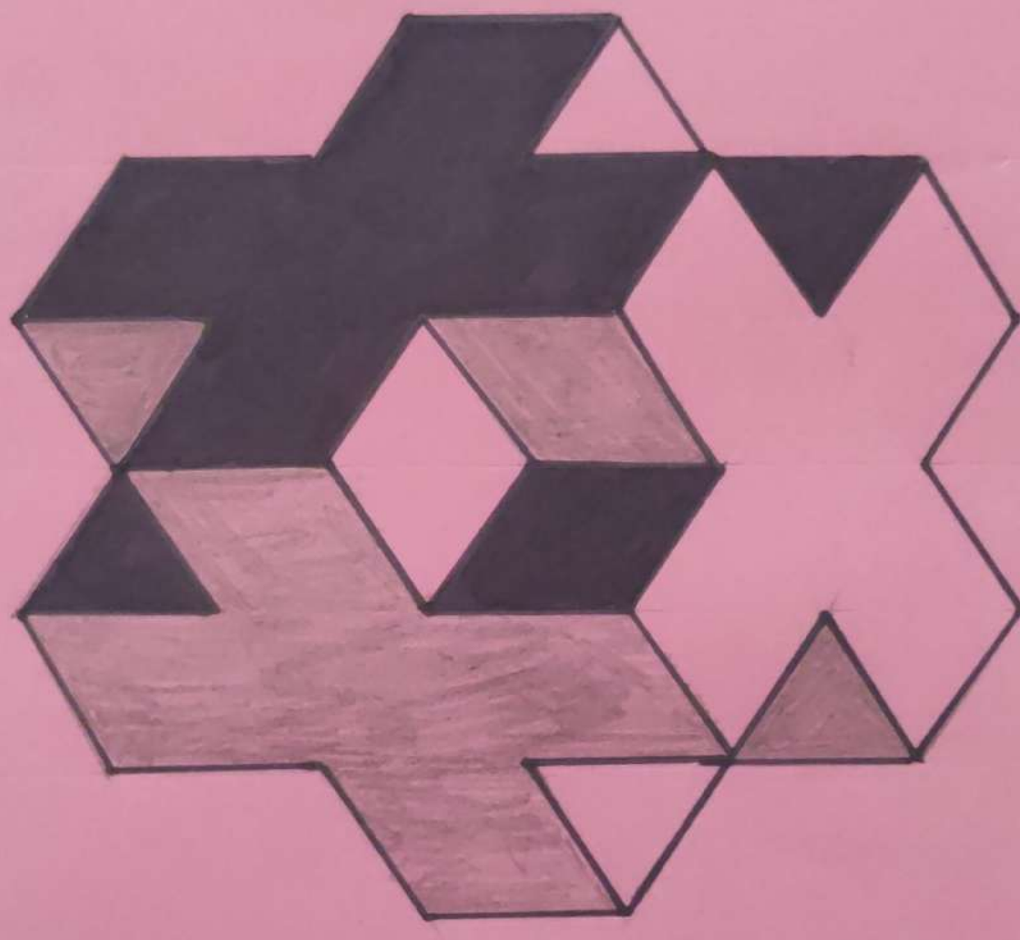


MITHUNA C NAIR

Mathematics ❤

M : Memory
A : Accuracy
T : Talent
H : Hardwork
E : Enthusiasm
M : Mind
A : Attention
T : Tact
I : Interest
C : Cleverness
S : Sincerity

ANJANA SURESH

ഏഴുവർണങ്ങളുടെ
തിളക്കമെങ്കിലും
ഞാൻ ഒരു

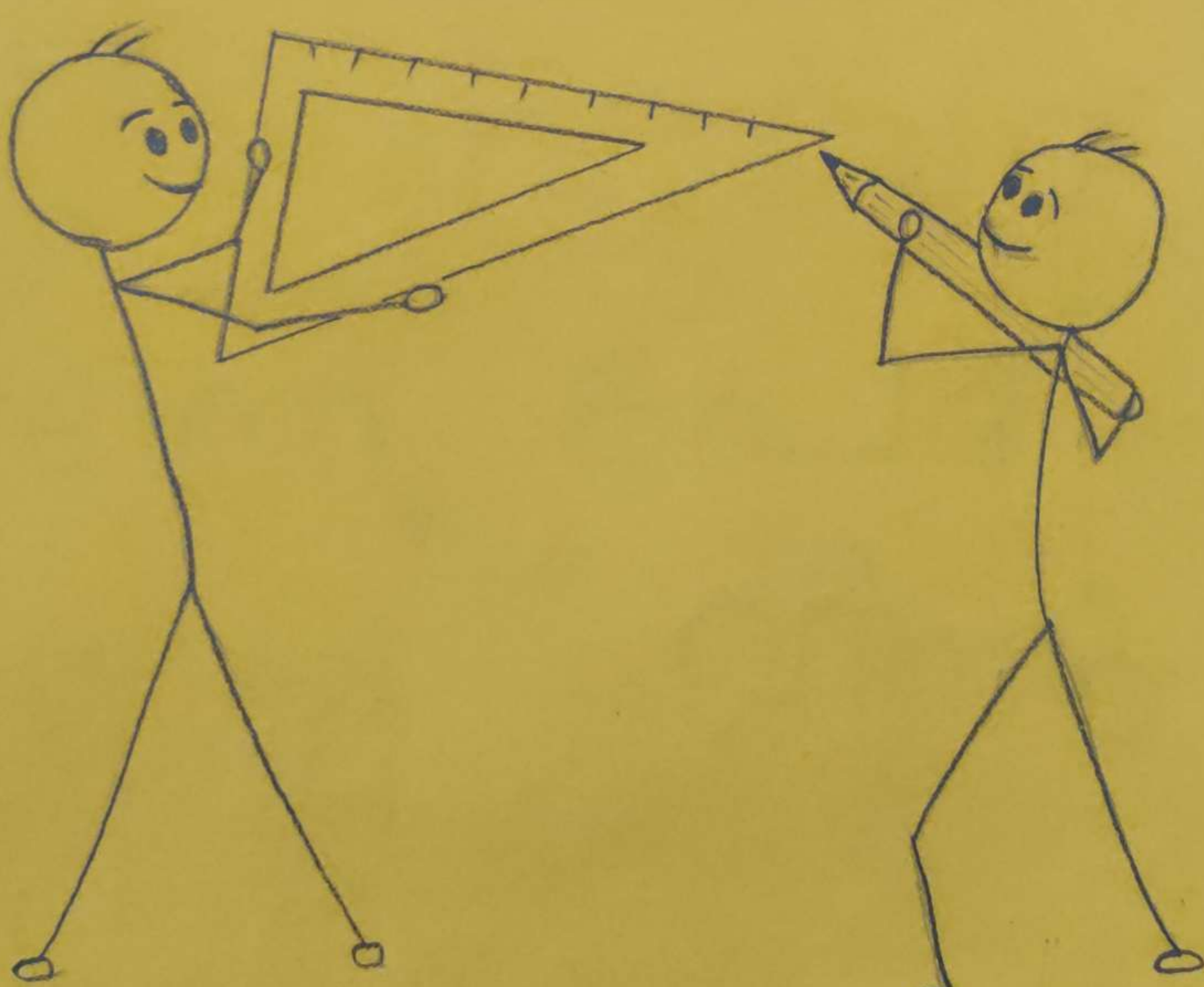
അഗോള-
വൃത്തമല്ലേ

NANDANA DAS

ഇനിയും തോരാത്ത
മഴയിതാ മണ്ണിൽ
വൃത്തസാഗരം തീർക്കുന്നു

NANDANA DAS

അടിത്തറ പാകി
ചാഞ്ഞും ചരിഞ്ഞും
നിന്നപ്പോഴാണൊരു
ത്രികോണമായത്..!



NANDANA DAS

ഞാനും എന്നിൽ
കുറഞ്ഞതും
സമം ചേർന്ന്
നിന്നപ്പോൾ
സമവാക്യം
എന്ന പേര്
വീണു.

NANDANA DAS

Interesting Number Paradox

The interesting number paradox is a self referential paradox that arises from the attempt to classify every natural number as either "interesting" or "uninteresting". The pardox states that every natural number is so interesting.

The paradox can be demonstrated by contradiction. Suppose there exists a non-empty set of uninteresting natural numbers. Then there would be a smallest uninteresting number. However, the smallest uninteresting number is itself interesting because it is the smallest uninteresting number. This contradiction implies that there cannot be a non-empty set of uninteresting natural numbers, and therefore every natural number must be interesting.

The interesting number paradox is a playful example of a self-referential paradox, which is a paradox that arises from a statement that refers to itself. Self referential paradoxes are often seen as an amusing or thought-provoking, but they can also be used to highlight philosophical questions about language, truth and knowledge.