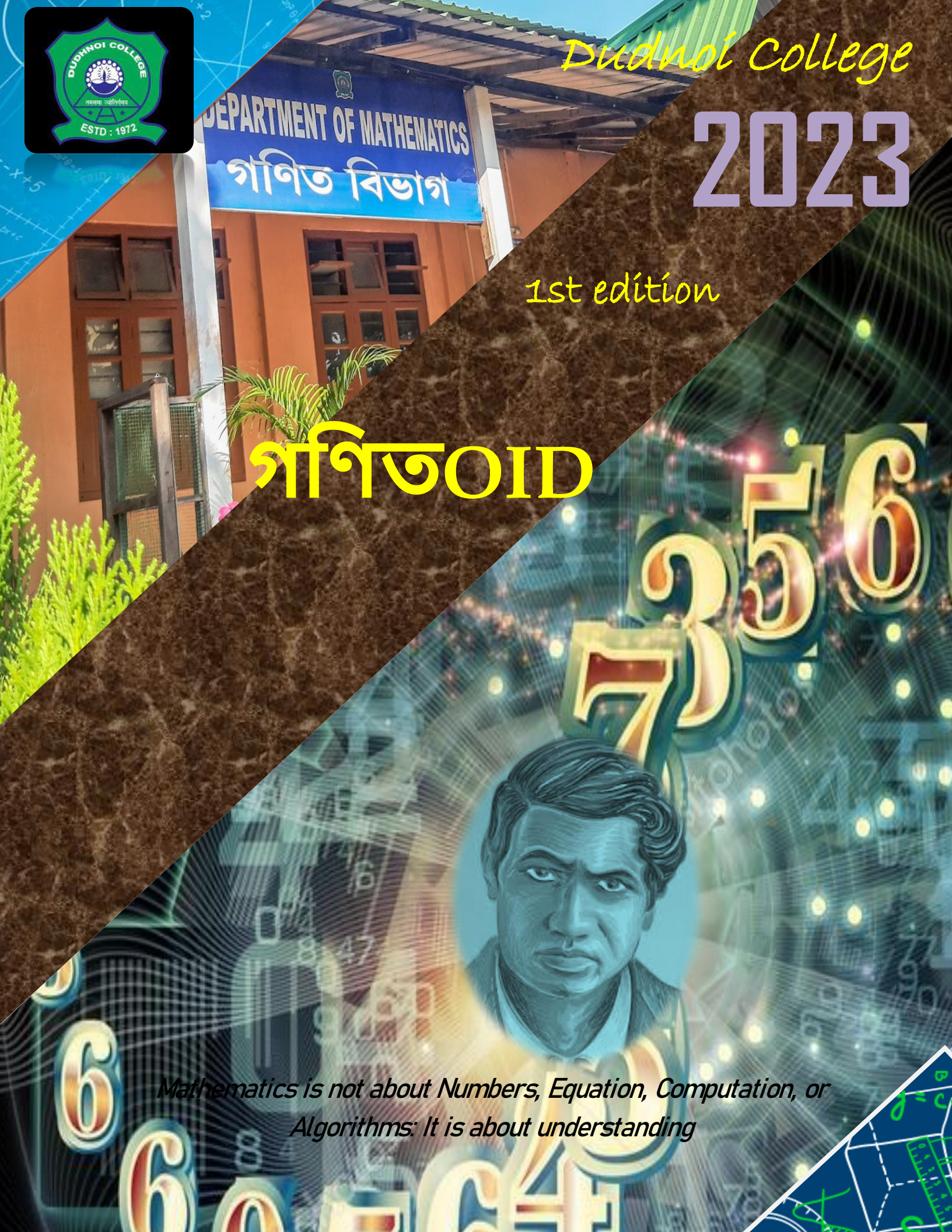
Dudhnoi College

2023

1st edition

গণিতOID



Mathematics is not about Numbers, Equation, Computation, or Algorithms: It is about understanding


DUDHNOI COLLEGE
ESTD : 1972

Message from the HOD

I am delighted to announce the upcoming release of the inaugural edition of our E-magazine, "গণিতOID," from the Department of Mathematics at Dudhnoi College. This marks a significant milestone as the magazine has been entirely crafted and conceptualized by our students under the guidance of our dedicated teachers. As an integral member of the department, I feel honored and extend my gratitude to all our students for presenting such a captivating and creative idea. This initiative not only showcases their talents but also reflects their hard work, serving as an inspiration for many in the times ahead.

Our primary objective is to foster a culture of creative thinking among students, facilitating their overall learning and growth. The pages of "গণিতOID" offer a sneak peek into the various activities that unfolded during the academic year, encompassing workshops, seminars, talks, trips, the annual departmental fest, and associated events. I am truly grateful to our undergraduate students for their active participation, fostering a collaborative team spirit. My sincere thanks go out to them for their invaluable contribution.

To all my dear students, your future journey will be designed based on the path you choose today.

***Best Wishes** for a successful and flourishing future.*

Regards
Dr. Bidyut Kalita,
HOD, Mathematics,
Dudhnoi College,
Dudhnoi, 783124

Message from the Principal

Esteemed readers,

I am delighted to share the news that the Department of Mathematics of Dudhnoi College is on the verge of releasing its inaugural E-Magazine, "গণিতOID." The relentless efforts invested since 2022 have paved the way for the realization of this momentous occasion.

Much like a college magazine serves as a mirror reflecting the essence of an institution, an E-magazine specific to a department mirrors the entirety of that department. This E-Magazine is meticulously crafted to capture the thoughts, perspectives, and intellectual endeavors of both students and faculty. With this, I express my sincere wish for the continued success and journey of this E-magazine.

Dr. Lalit Ch. Rabha
Principal of Dudhnoi College
Dudhnoi, Assam

EDITORIAL

"গণিতOID" marks the debut of our departmental E-magazine, where the term "গণিতOID" originates from the fusion of "Ganit" and "OID." The latter, a Greek word, is ingeniously employed to echo the preceding term "Ganit." Ganit embodies a continuous process of knowledge acquisition at every step of life.

The editorial board consistently contributes the finest and most original content to the E-magazine. The overwhelming response from both students and esteemed teachers, sharing their thoughts, has left us astounded.

"গণিতOID" serves as a creative platform for the burgeoning talents within our department. As students and teachers of the Mathematics Department at Dudhnoi College, we strive to convey our thoughts and creativity through the pages of "গণিতOID."

In curating the content for the inaugural edition, we endeavored to include all deserving poems and articles. We anticipate that the first edition of "গণিতOID" will set a high standard with its innovative content, undoubtedly surprising the readers. We collectively aspire for the continued growth and success of "গণিতOID" within our department, and we welcome your valuable feedback through the departmental email at 1976mathematics@gmail.com.

With regards,

Jasmine Rabha

Dedicated to
Respected
Dr. Bharat Borah

असतो मा सद्गमय
तमसो मा ज्योतिर्गमय
मृत्योर्मा अमृतं गमय

এই শ্লোকে আমাক অজ্ঞানৰ পৰা সত্যলৈ লৈ যায়, জ্ঞানৰ পোহৰে অজ্ঞানৰ অন্ধকাৰ আঁতৰাই মৃত্যুৰ পৰা মৃত্যুহীনতালৈ লৈ যাওক।

Dr. Bharat Borah

A truly amazing teacher is hard to Find, difficult to part with and impossible to forget.

Some days in life are really unforgettable one .You truly are a standout teacher because of your sheer dedication to your students when teaching Math, you always made extra sure that we understood the topic properly . We can't express how much we have enjoyed being in your class.

I just wanted to take some time to discuss about the journey to proper of Lt. Bharat Borah. He was born in a town Nagaon on 01/03/1984. He was growing as like other child when he reached at the age of 4 he start going school in Hatisang M.V. School, he was quiet a bright student have ever found. In this way he have done well and completed his Primary School. Right after finishing school he joined High School name Kuyidah Higher Secondary School and passed out H.S.L.C in a year 2000 and also HSSLC in a year 2002. He have completed his school life peacefully and with a great hope started his college life in Nagaon College at the year of 2003 with a Major in Mathematics and done very well over this journey and passed out in a year 2005. In a year 2007 he did his Master in Mathematics from Cotton College (Guwahati). Again he joined NEHU University for M.Phill in 2009.

On the same university he did PhD in a year 2016. In this way he struggle a life to prosper. His 1st priority was to achieve his goal. He never looked back whatever the situation arises in front of him but marched forward and finally sir got a Government job in a Dudhnoi College as an Assistant Professor of mathematics department. But his destiny was not in his favor. He suffered from COVID-19 and lost a life during the pandemic 02/06/2021. With a deep emotion and grieve we have said him a good-bye May his soul rest in peace. Sir will always be in the midst of our heart. The college has lost an incredible life. You have our sincere condolences. Our deepest sympathies and unending respect go out to you, sir.

Subarna Banik
Student, Dudhnoi College

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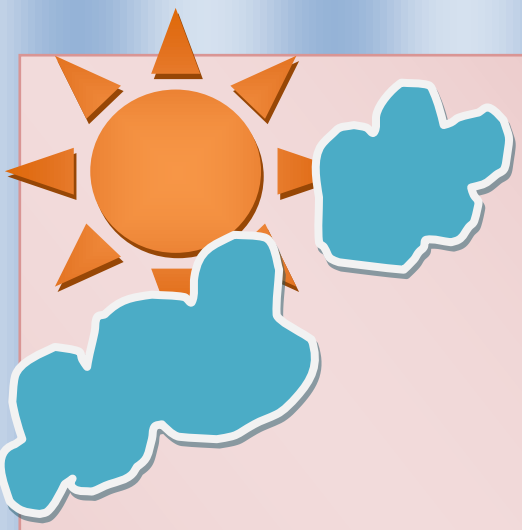
Stockpile of Mathematics

Mathematics is our department

Subarna Banik (B.Sc. 6th Semester)

Mathematics is our department
Where we get a compartment
Our professors were so good in teaching
So we are always in a mood of catching
Maths is everywhere all around
Everywhere they can be found.
Numbers is compulsory in every walk of life
Everybody knows as a strive
`This is the only numbers which used to put
On progress report
Which is our future's great support
It's very tough to learn complex
Whereas confusable simplex
How to solve transportation problem
Without knowing what is row and column
I don't know what I would be
If maths weren't a part of me



আশাৰ প্ৰদীপ

নুৰে জান্নাত (আগৰ শিক্ষাৰ্থী)

এই বিশাল বিশ্বৰ ধ্বনি শুনি

তোমাৰ বুকুত ফুলিছো আমি

নানা ৰূপে নানা বেশে

জ্ঞানৰ পোহৰ বিলাইছো আমি

নৱপ্ৰজন্মৰ সূৰুজ আমি

আমিয়েই উজ্বলাম এই বিশ্ব ভূমি

আমি সুভাষ, আমি বিশ্বাস

আমি ছাত্ৰ ছাত্ৰী।

অজস্ৰ মানুহৰ মনত থাকো আমি

উজ্জ্বল ভবিষ্যতৰ আশা আমি

সদায় সচেতন, দৃঢ় বিশ্বাস গামী

আমিয়ে সৌৰভ আমিয়ে গৌৰৱ

আমি ছাত্ৰ ছাত্ৰী।

সৃষ্টি

টুবুলু নাথ (আগৰ শিক্ষার্থী)

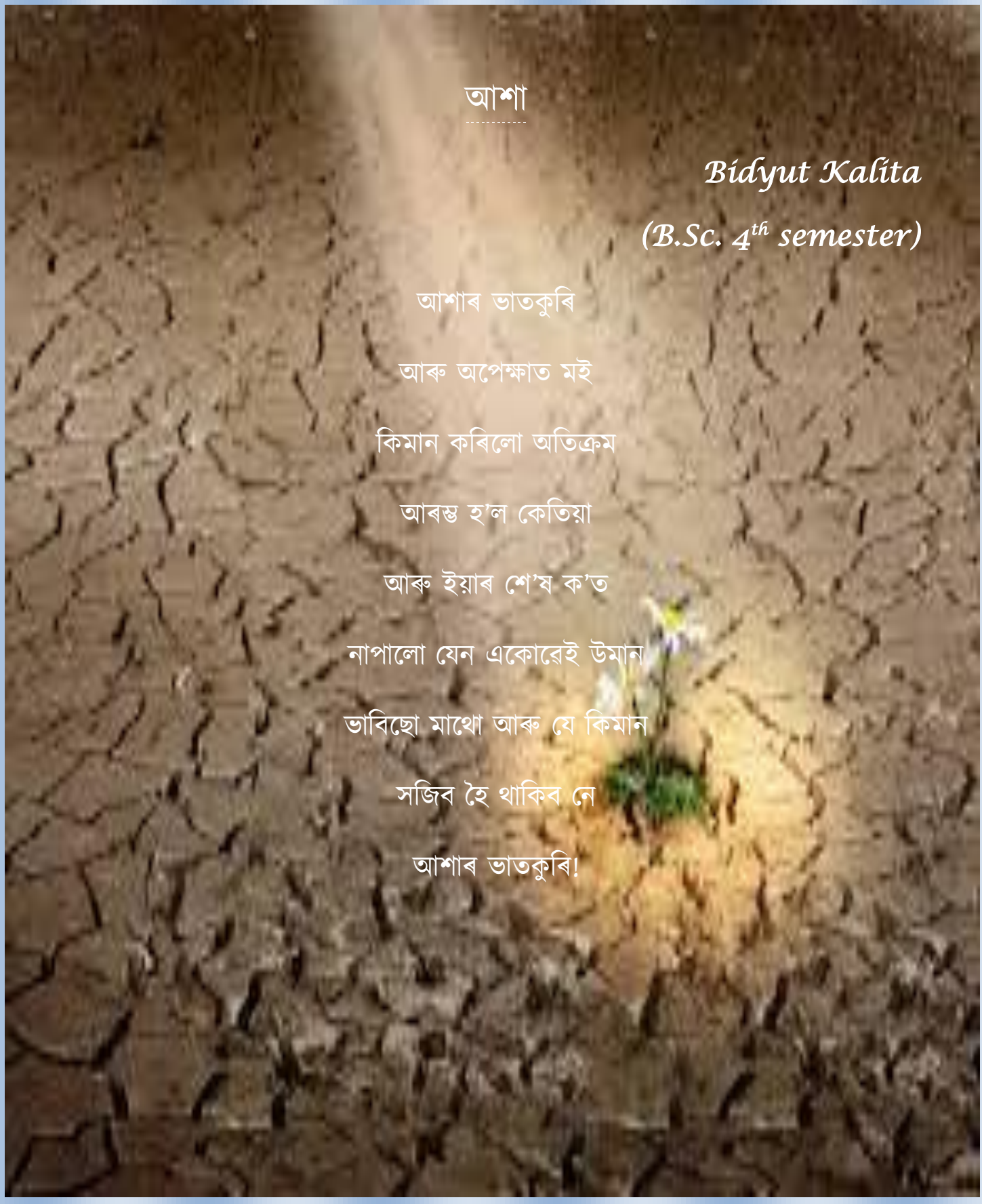
সৃষ্টি, এক নতুন যুগৰ আৰম্ভনি।
ধ্বংসাত্মকৰ পৰা সৃজনাত্মকলৈ
তোমাৰে অবদান।
এক সৃষ্টিৰ আঁৰত থাকে
অসহ্য দুখ যন্ত্রনা
তথাপি,
উপচাই দিয়ে সুখৰ দলিচা।
শিলে শিলে ঠেকা খাই অহা
জুৰিতিয়ে অসংখ্য বেদনা বুকুত লৈ
বিশাল সমতলত মেলি দিয়ে দুবাহু ।
ঠিক তেনেদৰে
সৃষ্টি সাধনাইহে বিয়পাই নিব
তোমাক দূৰ দিগন্তলৈ ।
তুমি সাধনাত মগ্ন হোৱা
তোমাৰ কৰণীয়বোৰ একাগ্রতাৰে কৰি যোৱা
নিস্বার্থভাৱে....
দেখিবা সফলতাই তোমাৰ মূৰ চুমিব।

Poem on maths

Junmoni Kalita

B.Sc. 6th semester

Maths you make all sad
Why should you not make
Them glad?
Maths you are precious like gold
Which is not to be sold.
Maths you are wealth
People say you are not good
For health
Maths you are lovely friend
People don't realize till the end
Maths you have many doubt
That's why people shout.
Maths you are very strong
You prove people wrong.
Why people hate you
They should love you.



আশা

Bidyut Kalita

(B.Sc. 4th semester)

আশাৰ ভাতকুৰি

আৰু অপেক্ষাত মই

কিমান কৰিলো অতিক্ৰম

আৰম্ভ হ'ল কেতিয়া

আৰু ইয়াৰ শে'ষ ক'ত

নাপালো যেন একোৱেই উমান

ভাবিছো মাথো আৰু যে কিমান

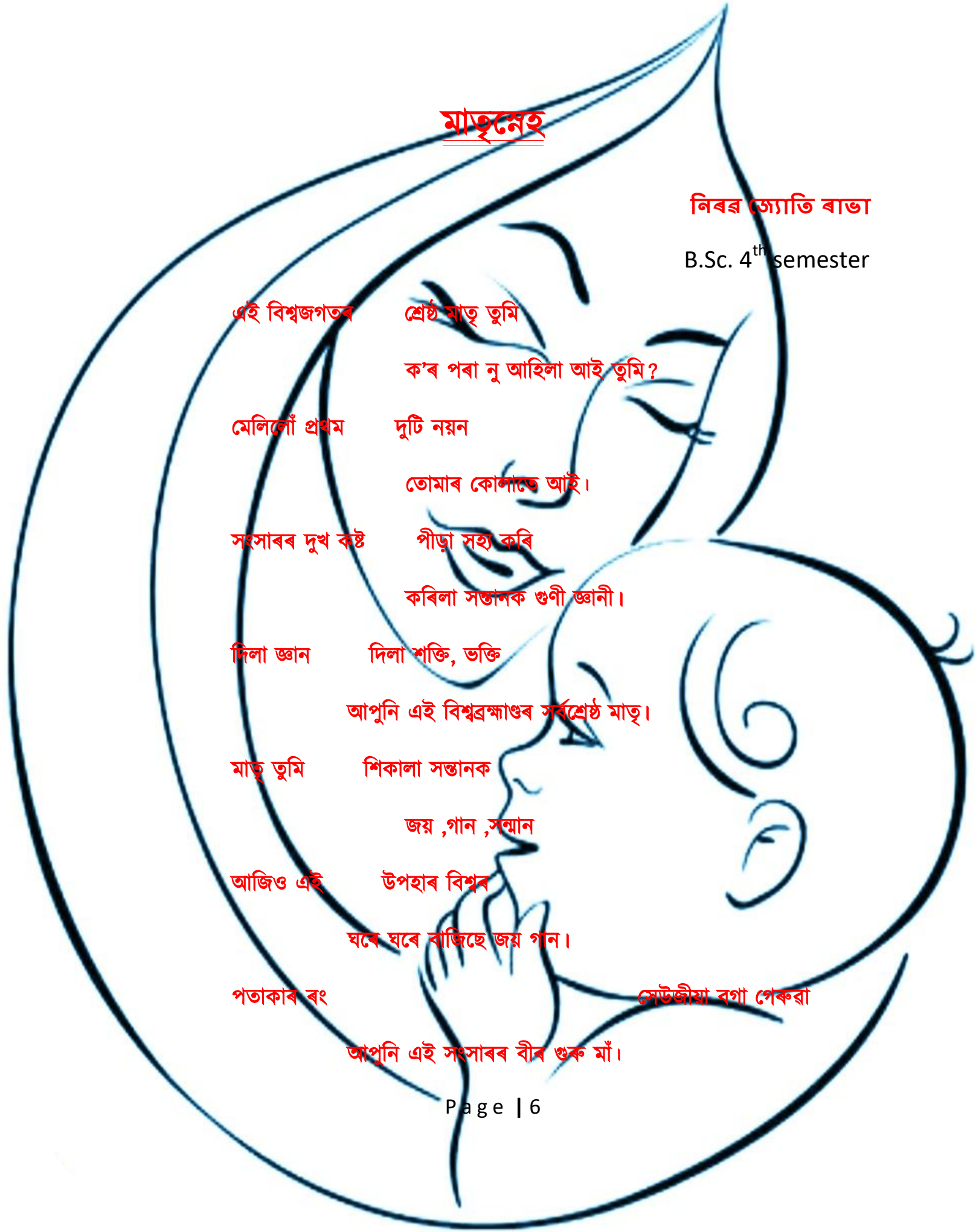
সজিব হৈ থাকিব নে

আশাৰ ভাতকুৰি!

মাতৃস্নেহ

নিৰৰ জ্যোতি ৰাভা

B.Sc. 4th semester



এই বিশ্বজগতৰ শ্রেষ্ঠ মাতৃ তুমি

ক'ৰ পৰা নু আহিলা আই তুমি?

মেলিলোঁ প্রথম দুটি নয়ন

তোমাৰ কোলাতে আই।

সংসাৰৰ দুখ কষ্ট পীড়া সহ্য কৰি

কৰিলা সন্তানক গুণী জ্ঞানী।

দিলা জ্ঞান দিলা শক্তি, ভক্তি

আপুনি এই বিশ্বব্রহ্মাণ্ডৰ সর্বশ্রেষ্ঠ মাতৃ।

মাতৃ তুমি শিকালা সন্তানক

জয় ,গান ,সন্মান

আজিও এই উপহাৰ বিশ্বৰ

ঘৰে ঘৰে বাজিছে জয় গান।

পতাকাৰ ৰং সেউজীয়া বগা গেৰুৱা

আপুনি এই সংসাৰৰ বীৰ গুৰু মাঁ।

হালুৱানি ছাৱ্রা (ৰাভা কবিতা)

সুন্দৰম ৰাভা (B.Sc. 4th Semester)

হালুৱানি ছাৱ্রা চিং

হাছং জিৱ্রা ৰাছামবাতাং

ৰাংছাঙা খামকায় আকুৰকায় গানজি

খাপাক তুচিতি তোৱা হুতিনি বৌল।

ৰাংচাকতি পাকে তোংকায় ৰাংছাং আৰো

ছালি পাথাৰি কুতুংকায় চিকা

চিমে খেঙে তোঙা তাল্কিয়া।

ছাওন ৰাংগ্রে হাপচি হা পাকে

ছেতে ৰাকায় চিঙি

আঘোন ৰাংগ্রেনি ছোনাছি গাপ

ছোনানি চাৰি কেন গান্দা জৌমাং।

ছামছোকে তোৱা গোছা আছানি তাল্কিকায় জৌমাং

চিঙি নেমছি কাপালানি আংকা নায় ৰেঙা।

ৰাংগ্রে পিৰি চুংজৌন ত্রাৱে ৰৌবাকায় গান্দা

চুঙে ত্রাৱে ৰৌবা খেনছ্রেংকায় জৌমাং

চাওছাবে জৌমাংবা ছোনাচি চাঙোৱা

পিদান মায় মায়ৰুংনি গৌন

ছুমব্রুক ছুমব্রুক নাছি খৌছ্রাঙা বৌছুমৌতা।

জৌমাংবা পাৰ গান্দা পাৰা

খুচেম খুচাৰ নায় ৰেঙা ৰং তামাছানি মিনি

হালুৱানি ছাৱ্রা চিং।

ব'হাগ

Rupjyoti Kalita (B.Sc. 4th semester)

ব'হাগ মাহত কুলিয়ে

কত' কি গীত গায়,

কুহু কুহু কৰি গাই থাকোতে

ব'হাগ গুচি যায় ।

কুলিৰ মাত শুনি কবি-ককাহঁতে

কবিতা ৰচে,

কুলিৰ মাত শুনিলে মোৰ

বৰ ভাল লাগে।

ডেউকা

ধজেন্দ্র ৰাভা (শিক্ষক)

সপোনৰ ডেউকা মেলিলে কবিলো

উচ্ছ্বয় পথলৈ অকলশৰে

দুখৰ মাজতো সুখৰ সংজ্ঞা বিচাৰি

স্বচ্ছন্দ চিতে ওলালো অতীতক পাহৰি

অজ্ঞাত জীৱন যাতনাৰ

মায়াময় খেল খেলিম বুলি।

জীৱন মুজঁৰ খোজে খোজে শুনিছো

অলেখ জনৰ লোৰ-সোবণি শব্দ

ন-নসলোনৰ পদুলিমুখত

অদৃষ্ট সপোনৰ মায়াময় খেল

অশ্রুৰ দেউল তনাচে সুখদা

এয়াইনে স্রষ্টাজনৰ আলোকনীতি !

দূৰন্ত বেলাচেতা ধূমুহে

হাঁহিমুখে যাম বুলি ওলালো

দুর্গমতৰা জীৱনৰণত

আকাংশা সোণালীৰ ৰথত উঠি।

শুক্রাচার্য্য ৰাভাক সুৱঁৰি এটি চমু লিখনি

অসীম কুমাৰ ৰাভা আৰু দিগম্বৰ ৰাভা (B.Sc. 4th Semester)

পশ্চিম অসমৰ গোৱালপাৰা জিলাৰ এখন দুর্গম গাঁও ৰামপুৰত ১৯৭৭ চনত জন্মগ্রহণ কৰিছিল শুক্রাচার্য্য ৰাভা। স্থানীয় জনজাতীয় লোকৰ সৈতে তেওঁ নাট্য প্রচাৰৰ বাবে কাম কৰিবলৈ আৰম্ভ কৰে। কম সময়ৰ ভিতৰতে তেওঁ বহুসংখ্যক নাটকৰ লেখক আৰু পৰিচালনা কৰিছিল আৰু দেশৰ ভিতৰত এজন অনন্য নাট্য কর্মী হিচাপে স্বীকৃতি লাভ কৰিছিল। গুৱাহাটীত নাট্য পৰিচালনা আৰু ডিজাইন বিষয়ক কর্মশালাত অংশগ্রহণ কৰাৰ পিছত মণিপুৰৰ ইম্ফলৰ কলাক্ষেত্রত এইচ কানহাইলাল আৰু সাবিত্রীৰ অধীনত দুবছৰ ধৰি প্রশিক্ষণ লয়। ১৯৯৮ চনত তেওঁ নিজৰ গাঁৰৰ গ্রাম্য নাট্য কেন্দ্র বাডুংডুপ্পা নামৰ নাট্যগোষ্ঠী প্রতিষ্ঠা কৰি জীৱনৰ আৰম্ভণিতে যুৱ প্রতিভা হিচাপে চিনাকি অর্জন কৰিছিল। তেওঁ ৰাভা , বড়ো আৰু নেপালী ভাষাৰ কেইবাখনো নাটক পৰিচালনা কৰিছিল।তেওঁ নাটক বোৰ বার্ষিক মুকলি আকাশৰ তলত নাট মহোৎসৱ -- 'আণ্ডাৰ দ্য ছাল থিয়েটাৰ ' -- আয়োজন কৰিছিল; যিয়ে দেশৰ বিভিন্ন প্রান্তৰ পৰা বিদেশৰ নাট্যপ্রেমীক গোৱালপাৰা জিলাৰ দুর্গম গাঁওলৈ লৈ আহিছিল। তেওঁৰ বিশিষ্ট নাটকসমূহ হ'ল- "টিখৰ, চানকয়, ৰূপালিম, লভিতা, পৈদম, মাদাইয়াহ মুচি, দাংগাই, দামুকচি "। ২০০৯ চনত সংগীত নাটক একাডেমীৰ পৰা পৰিচালনাৰ বাবে বিছমিল্লা খান ইউবা পুৰস্কাৰ আৰু ২০১০ চনত আদিত্য বকৰা বিৰলা কলা কিৰা পুৰুষাকাৰে সন্মানিত কৰা হয়। ২০১৮ চনৰ ৮ জুন তাৰিখে মাত্র ৪১ বছৰ বয়সতে তেওঁ এক বৃহৎ হৃদযন্ত্রৰ ক্রিয়া বন্ধ হৈ মৃত্যুমুখত পৰে। মৃত্যুৰ সময়ত তেওঁ পত্নী আৰু দুটা সন্তানক এৰি থৈ যায়। আমাৰ সকলোৰে ফালৰ পৰা শুক্রাচার্য্য ৰাভাক শ্রদ্ধাঞ্জলি জ্ঞাপন কৰিছো।

Invention of Imaginary Numbers

$$i = \sqrt{-1}$$

Abhijyoti Khakhalary (B.Sc. 6th Semester)

Before the 16^{th} century almost everyone considered the cubic eq^{ns} to be unsolvable. Back in those days mathematics wasn't written down in eq^{ns} but with words and pictures. For thousands of years mathematicians were obvious to negative solutions to their eq^{ns} because they were dealing with things in the world. Sometime around 1510, **Scipione Del Ferro** (Italian mathematician) finds a method to solve depressed cubic's (cubic equations without x squared term), but he tells no one about the finding except **Antonio Fior**. About 16 years later **Gerolarno Cardano** (Italian Polymath) discovers the solutions to the full cubic equations. Then one day Cardano comes across some cubic Equations that cannot be solved easily in the usual way. For example $x^3 = 15x + 4$, while trying to solve such problems, he encountered square roots of negative numbers; unable to see a way forward he avoided those cases. Few years later Italian mathematician Rafael Bombelli, seeing that square roots of negative numbers can neither is called neither positive nor negative. For example he wrote $\sqrt[3]{2 + \sqrt{121}}$ and $\sqrt[3]{2 - \sqrt{-121}}$ as a combination of an ordinary number and the new type of number involving the square roots of -1 In this way he was able to find real solutions to these solutions which Cardiano couldn't solve and thus began the use of imaginary numbers.

Math in Nature

Manosh Jyoti Rabha (Ex Guest Lecturer)

The Fibonacci sequence: Leonardo Fibonacci is the inventor of this mathematical pattern, which is a simple yet important one. Starting with the numbers 1 and 1, this sequence, based on Fibonacci's "rabbit problem," progresses by adding the two numbers before it. As a result, the number 2 (1+1) follows 1 and 1. The next number is 3 (1+2), then comes 5 (2+3), and so on. The series of numbers is remarkable because the natural world commonly contains them.

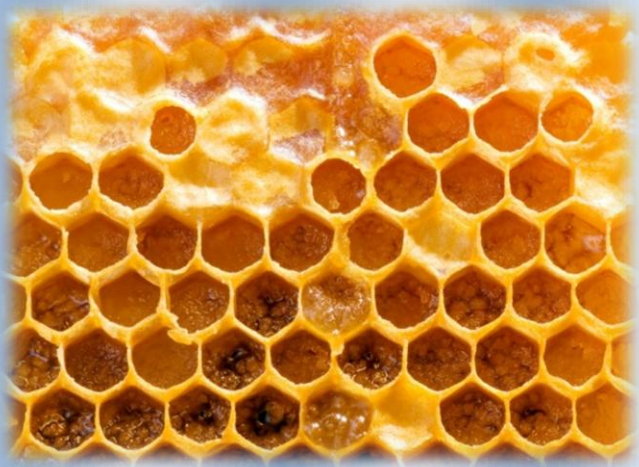
One or two examples are the number of spirals, pineapples, seeds, or petals on a flower that can be discovered in diverse objects. The numbers in this sequence also

A

appear in nature as shells and hurricanes, in addition to the distinctive shape known as a Fibonacci spiral.

Fractals in Nature: The fractal is another intriguing mathematical form that can be found in nature. A fractal is a repeating, self-similar shape, meaning that the shape exhibits the same basic shape repeatedly. In other words, whether you zoom in extremely tight or very far, the shape is apparent. Fractals abound in our cosmos, including the branching of the neurons in our brains, tree branches, fern leaves, and tree branches. Learn more about fractals and how we now understand and apply them in our environment by visiting the Fractal Foundation.

Hexagons in Nature: The hexagon is another amazing geometric shape created by nature. The shape of a regular hexagon, which has six equal sides, is frequently encountered in the environment. A bee hive is the most prevalent instance of a hexagon in nature.



Bees use a hexagonal tessellation to construct their hive.

However, did you realise that every snowflake also has a hexagonal shape?

The bubbles that make up a raft bubble also have hexagonal shapes. While bubbles are typically thought of as being spherical, when numerous bubbles are forced together on the water's surface, they take on the appearance of hexagons.

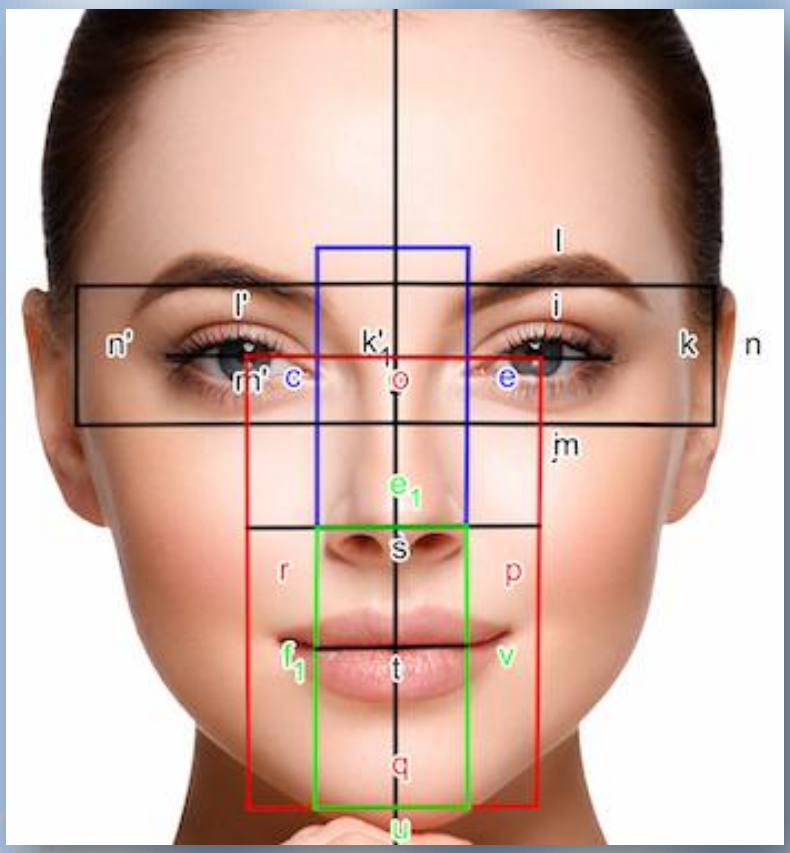
Concentric Circles in Nature: A group of concentric circles is another typical shape found in nature. Concentric refers to circles with varying radii but the same central point. The circles are therefore stacked inside of one another and are of various diameters. A typical illustration is when something hits the surface of a pond and causes ripples. However, we also notice concentric circles in the layers of an onion and the tree rings that develop over time. If you live close to a forest, you may search for a downed tree to count the rings in or search for an orb spider web, which is made of nearly flawless concentric circles.

Math in Outer Space: Many of these same mathematical features can be observed in space, which is far from the planet earth.

For instance, our galaxy is shaped like a Fibonacci spiral. The routes on which the planets orbit the sun are concentric. Additionally, we notice concentric circles in Saturn's rings. The symmetry between the earth, moon, and sun, which allows for solar eclipses, is also seen in outer space and is unique (as far as science can tell). The moon appears to totally conceal the sun when it travels between the sun and earth every two years. But given that the moon is so much smaller than the sun, how is this possible?

The moon is roughly 400 times smaller than the sun, but it is also roughly 400 times farther away due to math, you see. A total solar eclipse, which doesn't appear to occur on any other planet, is made possible by this symmetry. Isn't nature wonderful??

The Golden Ratio in the Human Body: Many of the proportions in the human body are said to be based on the golden ratio. These include the ideal face's shape and the proportion of the navel's height to the body's height. In fact, it is asserted that the golden ratio is related to almost all of the proportions of the ideal human face (see this article to find out more about such claims). But none of this is even nearly true. There are numerous potential ratios in the body, most of which fall between 1 and 2. You will undoubtedly obtain figures that are near to the value of the golden ratio if you take enough of them into account (around 1.618). This is particularly true if the objects you are measuring are vaguely defined (as in the image on the left), as it is possible to change the description to obtain the desired proportions. Additionally, the human body has proportions that are nearly 1.6, 5/3, 3/2, the square root of 2, 42/26, etc. if you look closely enough. The majority of numbers between 1 and 2



Any rectangle can be superimposed on a gorgeous face, and then it can be said that the rectangle's dimensions determine how beautiful it is.

will, in fact, have two body parts that approximate them in ratio. In the solar system, similar erroneous patterns have also been noticed (which also has lots of different ratios that you can choose from). Remember that no measurement will ever exactly match the golden ratio because it is an irrational number (see below). All of this is an illustration of how the human brain creates fictitious correlations. Indeed given enough data it is possible to find patterns that agree with almost any hypothesis. A good way to see this is to go outside on a nice sunny day and look at the clouds. Sooner or later you will find a cloud, which fits some novel pattern. As an example look at this BBC News article reporting on a "warrior queen" having been observed in a cloud pattern. This phenomenon can be quite dangerous when spurious correlations are found in data to prove a point. For example, they can lead to false accusations and even false convictions.

Reference:

1. https://mathgeekmama.com/math-in-nature/
2. https://mathgeekmama.com/math-in-nature/

Empowerment of Tribal Women by Areca Nut Leaf

Mintu Saud (B.Sc. 4th Semester)

"**Tamul**" Leaf as it is called in Assamese, means Areca Nut Leaf. This row material is sourced from Areca Nut trees; which are abundantly available in the north-eastern state of Assam. These resources have been underutilized, and the availability of raw material-"Tamul" Leaf can be converted into a potential Industry by making plates, bowls, and other cutlery from the leaves. Electrically powered hydraulic plate making machines are used for this process.

About Areca Nut plates Marketing Pvt. Ltd.

Operating since 2010, Areca nut Plates Marketing Pvt. Ltd. Produces and markets biodegradable disposable dinnerware through community-owned Micro-Enterprises spread across North East India, like Assam, Meghalaya, Mizoram, Nagaland, Tripura, and West Bengal. Their biodegradable dinnerware is made from Areca Nut Palm, which can only use when it matures and falls off naturally.

Areca Nut's current capacity is 500,000 plates per

month, out of which 50 percent are exported.

Areca nut envisages replacing 2000 MT of toxic disposable plates annually by 2025 and in the process generating employment for 20,000 rural women and youth.

How Tribal women from rural area from Meghalaya made organic cutlery by using tree leaves

Lady residents of ***Meghalaya's small village Dehalbagan*** *make single-use cutlery with easily biodegradable leaves. The petals we have been using are not very strong and cannot carry curry or liquid items in them; that are why these petals are replaced by either* ***plastic*** *or* ***Styrofoam cutlery****. Which are convenient to carry food but it takes more than* ***500*** *years to biodegrade. And we will find it very shocking that every month this single use of plastic and* ***Styrofoam*** *contributes more than* ***22,000 tonnes*** *to our landfills and it is very huge. Resident ladies of Meghalaya have the solution to this problem. In* ***Dehalbagan*** *ladies along with gents work to run the household. But they didn't earn enough so running the household was difficult. Then* ***Varsha V.*** *(a recipient of the SBI Youth for India Fellowship 2018-2019 batch) comes from an organization to this village and she noticed two things. First, the people of this village were very connected to nature. So they*

tried to use natural things only so that nature is not Harm. And second ladies of the ***Garo Tribe*** *were extremely hardworking and dedicated. When* ***Varsha*** *came here, she started spending time with the local ladies, and then she got to know that in* ***North-east India, Areca Nuts*** *are consumed with a lot of interest, and the large leaves are either used as fences or as a curtain or are simply thrown away. Then she said the ladies that if they make plates and bowls of these leaves, then she would help them to sell them in the market. Then 5 ladies of* ***Dehalbagan*** *started working on it. But to make cutlery, a machine was needed and they didn't have money for a machine. So they took a loan from the bank and bought a machine with that money. And they make some plates and gave them to Varsha V. For sale, all the cutlery they had taken to the market was sold out and they got new orders too. The specialty of this cutlery is that is very strong and it doesn't even harm the environment. That is why they got plenty of orders.*

Process

To collect raw materials they were required to go to the jungle. Sometimes, they go 6-8 kilometres inside the jungle and so that they can get good quality leaves. After that, the collected leaves are dried under the sun for 6-8 days. Then these leaves are cleaned. Lastly, these leaves are

pressed by Machines to be given shapes, and after packing they are ready to be dispatched.

*This initiative is started in 2018, and the name "**Go Garo**" in which till date these women have made more than 10,000 **biodegradable** and **sustainable** products and sent them to different places. One more interesting thing about them is that their packing is also **eco-friend.** Seeing the response to this business*

*Youngsters from the village also got inspired, and they decided to handle the marketing of this company. This is a small initiative to strengthen the economic condition of the villagers of **Dehalbagan.***

Benefits:

1. *100% Eco-friendly, compostable after use.*
2. *Compatible with hot/cold and liquid foods*
3. *Non-toxic , non-odorous*
4. *Creating business opportunities for local youth with local resources.*
5. *Easily stored and transported.*
6. *Cost-effective and very good shelf life.*

*Many times we only notice the problems that exist around us and then ignore them and leave. But actually, if we find solutions to them even huge problems can solve together.Villagers women of the **Dehalbagan** Shows that's example.*

কিতাপ পঢ়াৰ প্ৰতি আকৰ্ষণ

জেচমিন ৰাভা (Guest Lecturer)

আজিকালি প্ৰায় সকলোৱে কিতাপ পঢ়িবলৈ এৰি দিছে। তাৰে ভিতৰত কিছু মুষ্টিমেয় মানুহেহে এতিয়াও কিতাপৰ লগত জড়িত হৈ আছে। কিন্তু কিয় এনেকুৱা হৈছে এইটো সকলোৱে জানে । যিহেতু বৰ্তমান বিজ্ঞান প্ৰযুক্তিবিদ্যাৰ যুগ। কিতাপ পঢ়া সকলেহে জানে যে – কিতাপ পঢ়াৰ আমেজটোনো কি! ক'বলৈ গ'লে বৰ্তমান সময়ত ল'ৰা – ছোৱালীসকলে / ছাত্ৰ- ছাত্ৰীসকলে আমেজটো নাজানেই । সিহঁতক পঢ়াৰ প্ৰতি আকৰ্ষণ আনিবলৈও কিতাপত আজিকালি বিভিন্ন ধৰণৰ ছবি , হাঁহিমুখীয়া আকৃতি ইত্যাদিৰ ব্যৱস্থা লোৱা দেখা পোৱা যায় । কাৰণ ইহঁতে কিতাপৰ সলনি facebook, instagram, gaming ইত্যাদিতহে ব্যস্ত হৈ পৰিছে।

কিতাপ পঢ়াৰ কিছুমান ভাল দিশবোৰ হ'ল- জ্ঞান বৃদ্ধি হয় আৰু মগজু তীক্ষ্ণ হয় । কিতাপ পঢ়াৰ ভাল অভ্যাসে জীৱন আৰু জীৱন জীয়াই থকাৰ প্ৰতিভা শিকাই দিয়ে। পঢ়াই আপোনাক জীৱনৰ বিষয়ে অৱগত কৰিব পাৰে আৰু বুদ্ধিমান বাছনি আৰু সঠিক সিদ্ধান্ত লোৱাত সহায় কৰিব পাৰে।

এই মুহূৰ্তত আমাৰ বাবে আটাইতকৈ মহৎ শব্দ হৈছে 'কিতাপ'। কিতাপৰ পৃথিৱীখন এখন নিৰ্ভেজাল আৰু দ্বিতীয়বাৰ ইয়াৰ পৰা ওলাবলৈ সময় অথবা সন্ধি পোৱা নাই । ইয়াৰ লগত যিয়ে বন্ধুত্ব স্থাপন কৰিছে সেই বন্ধুত্ব অজৰ অমৰ। মানুহৰ আটাইতকৈ ভাল বন্ধু হল কিতাপ। সকলোৱে এৰি গলেও কিতাপে কেতিয়াও এৰি নাযায়। মানুহবোৰ স্বাৰ্থপৰ কিন্তু কিতাপৰ পৰা আমি যেতিয়াই ইচ্ছা তেতিয়াই জ্ঞা ন লভিবলৈ সক্ষম হও। (মানুহ বন্ধুৱে মানুহক ঠগিলেও কিতাপে কেতিয়াও নঠগে ।)

এতিয়া কোনবোৰ কিতাপ কিনিবা বা পঢ়িবৰ বাবে নির্বাচন কৰিবা এইটো বৰ ডাঙৰ বিষয় । এই গোটেই কথাবোৰ নির্ভৰ কৰিব তুমি কেনেকুৱা ধৰণৰ কিতাপ পঢ়ি ভাল পোৱা তাৰ ওপৰত। উদাহৰণস্বৰূপে- যদিহে তুমি সাধু কিতাপ পঢ়ি ভাল পোৱা আৰু ভ্রমণ কাহিনী পঢ়ি ভাল পোৱা অথবা গণিত কৰি ভাল পোৱা।তেনেহলে তুমি সেইখন সাধু কিতাপ কিনিবা যিখন সাধু কিতাপৰ পৰা তুমি দুটা কথা শিকিব পাৰিবা ।

ভ্রমণ কাহিনীৰ কিতাপ সেইখনই কিনিবা লাগে যিখনে তোমাক নির্দিষ্ট ঠাইখনৰ বিষয়ে বিস্তৃভাৱে জ্ঞান দিয়ে আৰু গণিতৰ কিতাপ নিজৰ পাঠ্যপুঠিৰ বাহিৰেও সেইখনই কিনিব লাগে যৰ পৰা তুমি জানিবলগীয়া কথা সকলো সাঙুৰি তাতোকৈয়ো অধিক নানা প্রকাৰেৰে সমাধান কৰাত সহায়ক হয় বা কৌশল শিকিব পৰা । কিতাপ নির্বাচনৰ প্রথম কথা হ'ল এয়েই যে, তুমি বিচৰা সকলো বস্তু তাত আছেনে নাই তাক স্থিৰ কৰা। এইটো তুমি কৰিব পাৰিবা কিতাপৰ লগত সম্পর্ক থকা ব্যক্তিৰ সহায়তহে। সেয়েহে এই ক্ষেত্রত তুমি পূর্বৱর্তী কার্য হিচাপে তেখেতৰ লগত কথা পাতিব লাগিব।

এটা কথা সদায় মনত ৰাখিবা যে অন্য যি কিতাপেই নপঢ়া কিয়, মহৎলোকৰ জীৱনী বা আত্মজীৱনীসমূহ অধ্যয়নত হেলা নকৰিবা। মহৎলোকৰ জীৱনাদর্শন আৰু জীৱনৰ গতিধাৰাই বাট হেৰুৱাজনক পোহৰৰ দিশ দেখুৱায়। তেওলোকৰ সাধনা আৰু চিন্তা–চর্চাই তোমাক কোনো কথা সম্পর্কে সিদ্ধান্ত ল 'বলৈ সাহস আৰু বাট দেখুৱাব। সেয়েহে মহৎলোকৰ জীৱনী অধ্যয়ন সঁচাকৈয়ে অতি প্রয়োজন।

আটাইতকৈ প্রয়োজনীয় কথাটো হ 'ল কিতাপ পঢ়ি উক্ত কিতাপৰ দৰকাৰী তথ্যৰ টোকাকৰণ । এখন টোকা বহীত প্রয়োজনীয় কথাখিনি টোকাৰ ৰূপত লিখি পিছত সেইখিনি আজৰি সময়ত লুটিয়ালে বহু কামত আহিব। সেয়ে কিতাপ পঢ়াৰ ক্ষেত্রত এই কথা সদায় মনত ৰাখিবা ।

Date Conversion Table

Tohidur Rahman (B.Sc. 2nd semester)

Millennium	1000 years
Century	100 years
Decade	10 years
Common Year	1 year or 365 days or 12 months
Leap year	366 days or months
Quarter	3 months
Month	28-31 days Jan., Mar., May, July, Aug., Oct., Dec., -31 days Apr., June, Sep., Nov. -30 days Feb.-28 days for common year and 29 days for leap year
Week	7 days, 168 hours, 10080 minutes, 604800 seconds
Day	24 hours or 1440 minutes or 86400 seconds
Hour	60 minutes or 3600 seconds
Minute	60 seconds
Second	Tik tak ☺
Mili second	10^{-3}Seconds
Micro second	10^{-6} second
Nano second	10^{-9} second
Pico second	10^{-12}second

History about Some Mathematicians

HYPATIA

Dr. Bidyut Kalita (Head of the Department)

Hypatia, the inaugural female mathematician, born around 355 CE and passing away in March 415 in Alexandria, was a multifaceted scholar encompassing the roles of mathematician, astronomer, and philosopher during a tumultuous period in the city's history. As the progeny of Theon of Alexandria, himself a distinguished mathematician and astronomer and the final documented member of the Alexandrian Museum, Hypatia inherited a legacy rooted in the preservation of Euclid's Elements, with Theon's noteworthy contributions extending to extensive writings, including commentary on Ptolemy's Almagest and Handy Tables.

Hypatia, as the torchbearer of her father's intellectual pursuits, undertook a resolute endeavor to safeguard the Greek mathematical and astronomical heritage amid challenging circumstances. She stands as the earliest documented female mathematician, and while detailed information about her life and work is scarce, she is credited with commentaries on Perga's Conics (geometry) and Diophantus of Alexandria's Arithmetic (number theory), in addition to an astronomical table. Regrettably, these writings, which constitute the sole attributed works to her name, have been lost to history, although endeavors have been made to reconstruct fragments of their content. In her commentaries on Apollonius and Diophantus, Hypatia not only continued her father's program but also ventured into more recent and intricate domains, further enriching the mathematical and astronomical legacy left by her predecessors.

In her era, she stood as the foremost mathematician and astronomer globally, holding the unique distinction of being the sole woman to claim such a position. Additionally, she garnered widespread popularity as a teacher and lecturer, captivating audiences with discussions on philosophical subjects of a less-specialized nature, attracting a devoted following of students.

Her philosophical stance aligned with Neo-Platonism, a perspective deemed "pagan" during a time marked by intense religious strife between Christians (both orthodox and "heretical"), Jews, and pagans. Rooted in the pursuit of the One, an underlying reality partially reachable through human abstraction from Platonic forms—themselves abstractions from everyday reality—her philosophy guided her towards a life dedicated to virginity.

The religious discord of her time manifested in the destruction of the Serapeum, the temple of the Greco-Egyptian god Serapis, orchestrated by Theophilus, Alexandria's bishop until his demise in 412 CE. While this event may have marked the final demise of the great Library of Alexandria, potentially housed within the Serapeum, Theophilus, who was acquainted with

Synesius, an ardent admirer and student of Hypatia, spared her from the repercussions, allowing her to pursue her intellectual pursuits unhindered.

However, the climate of tolerance shifted with the passing of Synesius and Theophilus and the ascension of Cyril to the bishopric of Alexandria. Shortly thereafter, Hypatia fell victim to a brutal murder at the hands of a group of Christian zealots. The degree of Cyril's responsibility in this tragedy remains a subject of contentious debate. Regardless, Hypatia emerged as a potent feminist symbol and a beacon of affirmation for intellectual endeavors in the face of ignorant prejudice. While her intellectual achievements alone warranted the preservation and respect of her name, the tragic circumstances of her death added an even greater poignancy to her legacy.

References:

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4. https://www.britannica.com/biography/Hypatia
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SHAKUNTALA DEVI

Dr. Mridul Dutta (Assistant Professor)

Shakuntala Devi, often hailed as the "Human Computer," was an Indian author and mental calculator, born on November 4, 1929, and passing away on April 21, 2013. Renowned for her extraordinary talent, she earned a place in the 1982 edition of The Guinness Book of World Records. Although she set the record on June 18, 1980, at Imperial College in London, it was only officially acknowledged posthumously on July 30, 2020.

From an early age, Devi displayed her mathematical prowess, impressing observers at the University of Mysore despite lacking formal education. Committed to simplifying mathematical computations for students, she diligently worked towards this goal. In her later years, she authored a variety of books, spanning novels and works on astrology, algebra, and riddles. Notably, "The World of Homosexuals," a pioneering work by Devi, stands as India's first exploration of homosexuality, casting a positive light on the subject. Shakuntala Devi's contributions to mathematics, literature, and her progressive views on homosexuality have solidified her legacy as a trailblazer in multiple fields.

Early life

Shakuntala Devi was born on November 4, 1929, in Bangalore, Karnataka. Her father, C V Sundararaja Rao, previously a versatile performer in a circus—dabbling in trapeze acts, tightrope walking, lion training, and magic—discovered her extraordinary talent for memorizing numbers when she was just three years old. Recognizing her mathematical aptitude, he left the circus and took her on tour shows, showcasing her remarkable abilities without the benefit of formal education.

Despite lacking official schooling, Devi's prowess in mathematics became evident at the age of six when she delivered an impressive arithmetic demonstration at the University of Mysore. In 1944, she made the significant move to London, England.

Mental calculation

Devi showcased her mathematical prowess across various nations, including a visit to New York City in 1976 as part of her 1950 European tour. In 1988, she traveled to the United States for an examination of her skills by Arthur Jensen, a professor of educational psychology at the University of California, Berkeley. Jensen presented Devi with challenges, such as calculating the seventh root of 170,859,375 and the cube root of 61,629,875. Remarkably, before Jensen could record the answers (395 and 15, respectively), Devi swiftly provided them. Jensen documented his findings in the scholarly journal Intelligence in 1990.

In 1977 at Southern Methodist University, Devi astounded observers by delivering the 23rd root of a 201-digit number in approximately 50 seconds. The result, 546,372,891, was verified by calculations performed by the UNIVAC 1101 computer at the US Bureau of Standards, requiring specialized software. The computational effort took longer than Devi's rapid mental calculation. On June 18, 1980, she demonstrated the multiplication of two 13-digit numbers, 2,465,099,745,779 and 7,686,369,774,870, chosen randomly by the Department of Computing at Imperial College London. In a mere 28 seconds, Devi accurately provided the result: 18,947,668,177,995,426,462,773,730. The Guinness Book of World Records documented this extraordinary feat in 1982, with author Steven Smith noting its unprecedented nature.

In her 1977 book, "Figuring: The Joy of Numbers," Shakuntala Devi elucidated several techniques she employed to perform mental computations. A reference to this insightful exploration can be found in the 1995 edition of The Guinness Book of Records. In response to a question about why children

harbor aversions to mathematics, Devi offered a profound perspective, stating, "Due to the incorrect strategy. Because it is treated as a topic".

Devi asserted that mathematics is an integral part of every facet of life, encompassing time, one's date of birth, the food consumed, and the very air breathed. Having demonstrated mathematical aptitude since the tender age of three, she advocated for commencing arithmetic education at the age of six. According to Devi, this early initiation lays the foundation for a comprehensive understanding of mathematics.

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ZERO

Hironmoy Rabha (B.Sc. 2nd Semester)

In India, the historical origins of zero trace back to the 5th century, where the renowned mathematician and astronomer Aryabhatta introduced the concept. Originally represented by a dot, when zero transitioned to Arab culture, it adopted an oval shape, evolving into the familiar "0" we recognize today. Consequently, the Hindu-Arabic numeral system incorporates zero. Credited with the invention of zero as a follower of Aryabhatta, Bramhaputra began employing it in mathematical calculations during the 7th century.

Zero made its way to the Middle East from India a century later, reaching China first. Around 773 AD, the mathematician Mohammad ibn-Musa al-Khowarizmi worked on equations that yielded zero. Subsequently, Fibonacci, an Italian mathematician, introduced zero to Europe circa 1200 AD.

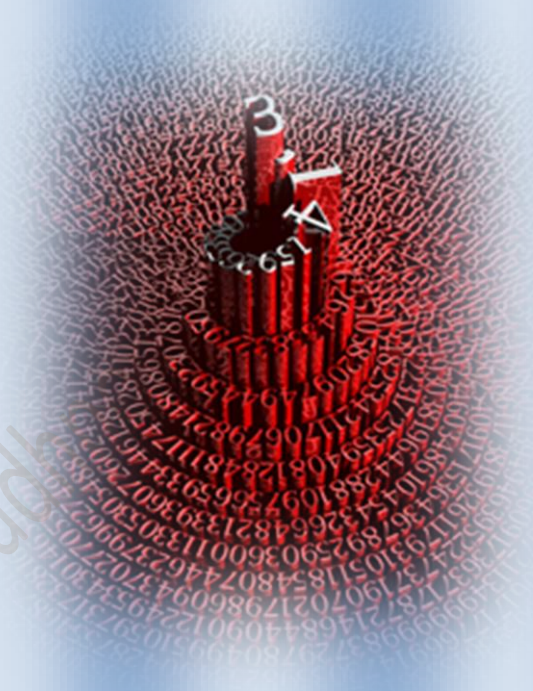
Initially termed 'Sunya' in Sanskrit when introduced in India, zero acquired the name 'Sifr' in the Middle East, and Italians referred to it as 'Zefero,' later shortened to "Zer'o" in French. The contemporary usage of the term "zero" is influenced by these historical derivations. Today, zero is a universally recognized and widely used numerical concept.

Reference:

https://www.geeksforgeeks.org/who-invented-zero

PI(π)

Priyanjit Rabha (B.Sc. 4th Semester)



Archimedes of Syracuse performed the first calculation of π (287–212 BC), one of the greatest mathematicians of the ancient world. Archimedes approximated the area of a circle by using the Pythagorean Theorem to find the areas of two regular polygons: the polygon inscribed within the circle and the polygon within which the circle was circumscribed. Since the actual area of the circle lies between the areas of the inscribed and circumscribed polygons, the areas of the polygons gave upper and lower bounds for the area of the circle. Archimedes knew that he had not found the value of π but only an approximation within those limits. In this way, Archimedes showed that π is between $3(10/71) < \pi < 3(1/7)$.

Ptolemy, 400 years ago, calculated the value of π to be 3.1416 using the Archimedes principle.

According to the ancient Babylonian calculations, the area of a circle is three times its radius squared, which gave a value of $\pi = 3$. A value of 3.125 for π on a Babylonian tablet (circa 1900-1680 BC) is a closer approximation.

The Rhind Papyrus (circa 1650 BC) provides insight into ancient Egyptian mathematics. The Egyptians calculated the area of a circle by a formula that gave the approximate value of 3.1605 for π.

Zu Chongzhi (429-501), a brilliant Chinese mathematician and astronomer, took a similar approach. Although Zu Chongzhi would not have been familiar with Archimedes' method, little is known about his work because his book has been lost. He determined that 355/113 is the number for the ratio of a circle's circumference to its diameter. To compute this accuracy for π, he must have started with an inscribed regular 24,576-gon and performed

lengthy calculations involving hundreds of square roots carried out to 9 decimal places.

In the 1700s, mathematicians started utilising the Greek letter π. The symbol was used by William Jones in 1706, but Leonhard Euler adopted it in 1737 and made it more widely used.

A method of computing π based on probability was developed by a French mathematician named Georges Buffon in the eighteenth century.

Renaissance in Europe Francois Viete proposed significant changes to Archimedes in 1593, and he devised the following formula:

$$\frac{2}{\pi} = \sqrt{\frac{1}{2}} + \sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{\frac{1}{2}}} + \sqrt{\frac{1}{2}+\frac{1}{2}+\frac{1}{2}\sqrt{\frac{1}{2}+\frac{1}{2}\sqrt{\frac{1}{2}}}} + \cdots$$

Sir Isaac Newton in 1665 found arc functions related to π.

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3. https://www.exploratorium.edu/pi/history-of-pi#:~:text=The%20first%20calculation%20of%20%CF%80,mathematicians%20of%20the%20ancient%20world.

THE EVOLUTION OF INTEGRAL CALCULUS

Kausik Singha (B.Sc. 2nd semester)

What is the mathematical application of integral calculus? The concept of integral calculus has its roots in the early history of mathematics and can be traced back to the Greek mathematicians' approach of exhaustion. This technique was developed to address issues with computing solid body volumes, surface areas, and area of flat figures, among other calculations. Thus, it is possible to think of the exhaustion approach as an early integration method. The early period's most significant advancement in the exhaustion method was found in the writings of Eudoxus (440 B.C.) and Archimedes (300 B.C.).

Calculus theory was first approached systematically in the seventeenth century. Newton started his work on calculus, which he called the theory of fluxions, in 1665. He utilized this theory to calculate the radius and tangent of curvature at any point on a curve. The anti-derivative (indefinite integral), also known as the inverse technique of tangents, is the fundamental idea of the inverse function that Newton developed.

Leibnitz wrote an article in the Acta Eruditorum in 1684–1666, which he named Canlculas summatorius because it dealt with the summing of several infinitely small areas, the sum of which he denoted with the sign "∫." In 1696, he modified this article to Calculus Integrali, per J. Bernoulli's recommendation. This was in line with Newton's inverse tangent approach. Both Newton and Leibnitz adopted quite independent lines of a radically different approach. However, respective theories accomplished practically identical results. Leibnitz used the notion of definite integral and what is quite certain is that he first clearly

appreciated the tie-up between the antiderivative and the definite integral.

In conclusion, the work of P. de Fermat, I. Newton, and G. Leibnitz towards the end of the century produced the basic ideas and theory of integral calculus and mainly its links with differential calculus. But A.L. Cauchy didn't create this reasoning using the concept of limit until the early 20th century. Lastly, it is worth mentioning the following quotation by Lie Sophie's:

"It may be said that the conceptions of differential quotient and integral which in their origin certainly go back to Archimedes were introduced in science by the investigations of Kepler, Descartes, Cavalieri, Fermat, and Wallis....the discovery that differentiation and integration are inverse operations belongs to Newton and Leibnitz."

References:

1. NCERT Books
2. https://www.google.com/search?q=THE+EVOLUTION+OF+INTEGRAL+CALCULUS

Historical Note about Trigonometry

Sundaram Rabha (B.Sc. *4th Semester)*

The study of trigonometry was first started in India. The ancient Indian Mathematicians, ***Aryabhata*** *(476A.D.),* ***Brahmagupta*** *(598 A.D.),* ***Bhaskara I*** *(600 A.D.) and* ***Bhaskara II*** *(1114 A.D.) got important results of trigonometry. All this knowledge went from India to Arabia and then from there to Europe. The Greeks had also started the study of trigonometry but their approach was so clumsy that when the Indian approach became known, it was immediately adopted throughout the world.*

In India, the predecessor of the modern trigonometric functions, known as the sine of an angle, and the introduction of the sine function represents one of the main contribution of the ***siddhantas*** *(Sanskrit astronomical works) to mathematics.*

Bhaskara I *(about 600 A.D.) gave formulae to find the values of sine functions for angles more than 90°. A sixteenth century Malayalam work* ***Yuktibhasa*** *contains a proof for the expansion of sin (A + B). Exact expression for sines or cosines of 18°, 36°, 54°, 72°, etc., were given by* ***Bhaskara II****.*

The symbols $\sin^{-1} x$, $\cos^{-1} x$, *etc., for arc sin x, arc cos x, etc., were suggested by the astronomer* ***Sir John F.W. Hersehel*** *(1813) The name of* ***Thales*** *(about 600 B.C.) is invariably associated with height and distance problems.He is credited with the determination of the height of a great pyramid in Egypt by measuring shadows of the pyramid and an auxiliary staff (or gnomon) of known height, and comparing the ratios:*

$$\frac{H}{S} = \frac{h}{s} = \textbf{tan}\ (\textit{sun's altitude})$$

Thales is also said to have calculated the distance of a ship at sea through the proportionality of sides of similar triangles. Problems on height and distance using the similarity property are also found in ancient Indian works.

References:

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2. https://www.google.com/search?q=Historical+Note+about+Trigonometry

Mathematics in Classical Music

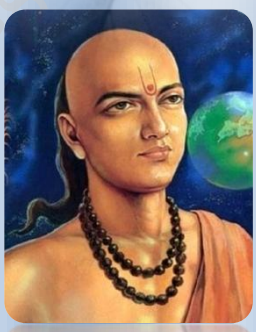
Rajita Sharma (Ex-students)

Mathematics and music are connected. Almost every ancient civilized society, including the Greeks, Egyptians, Chinese, and Indians, investigated the relationship between music and mathematics. It was well known that renowned philosopher Plato loved music. According to a 2012 study, there is a 40% increase in brain power when taking mathematical exams when listening to music. Numerous mathematicians also have a passion for music. In music, a fundamental major chord has a mathematical description. The "Talas," or Ragas, are categorized in Indian classical music as "Barabar," "Dugun," "Tingun," and "Chougun," while the Layas are categorized as "Bilamvit," "Madhya," and "Druta" based on the tempo and interval between two successive notes. Furthermore, the Talasin table is categorized as Adilaya (3/2), Kuadilaya (5/4), Barabar (meaning 1), etc. According to the ancient Chinese philosopher Confucius, there are several essential truths found in music. Thus, we discover that mathematics and music have a lovely relationship.

Some Famous Quotes of Mathematics

An equation for me has no meaning, unless it expresses a thought of God

—Srinivasa Iyengar Ramanujan



He is the inventor of the most important invention in mathematics – ZERO

—Aryabhata

As the sun eclipses the stars by his brilliancy, so the man of knowledge will eclipse the fame of others in assemblies of the people if he proposes algebraic problems, and still more if he solves them

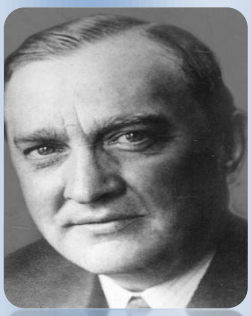
—Brahmagupta

Pure mathematics is, in its way, the poetry of logical ideas

— Albert Einstein

Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers

— Shakuntala Devi



Mathematics is the most beautiful and most powerful creation of the human spirit

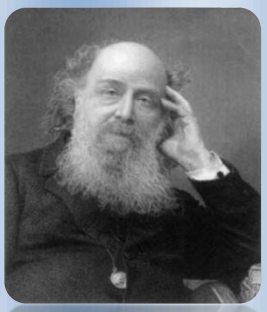
— **Stefan Banach**

We will always have STEM with us. Some things will drop out of the public eye and go away, but there will always be science, engineering, and technology. And there will always, always be mathematics

— **Katherine Johnson**

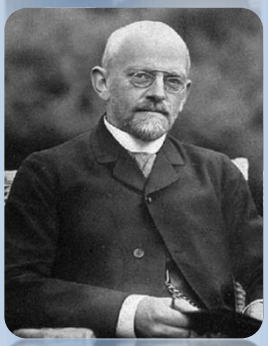
Mathematics as an expression of the human mind reflects the active will, the contemplative reason, and the desire for aesthetic perfection. Its basic elements are logic and intuition, analysis and construction, generality and individuality

— **Richard Courant**



Mathematics is the music of reason

— **James Joseph Sylvester**



Mathematics knows no races or geographic boundaries; for mathematics, the cultural world is one country

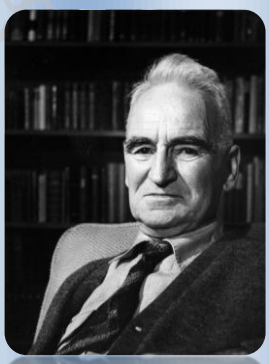
— **David Hilbert**

There should be no such thing as boring mathematics

— **Edsger W. Dijkstra**

'Obvious' is the most dangerous word in mathematics

— **Eric Temple Bell**

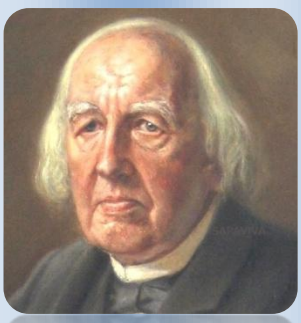


Mathematics are the result of mysterious powers which no one understands, and which the unconscious recognition of beauty must play an important part. Out of an infinity of designs a mathematician chooses one pattern for beauty's sake and pulls it down to earth

— **Marston Morse**

It is impossible to be a mathematician without being a poet in soul

— **Sofia Kovalevskaya**



A mathematician who is not also something of a poet will never be a complete mathematician

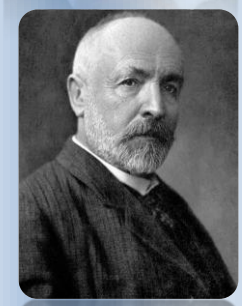
— **Karl Weierstrass**

Mathematics compares the most diverse phenomena and discovers the secret analogies that unite them

— **Joseph Fourier**

Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding

— **William Paul Thurston**

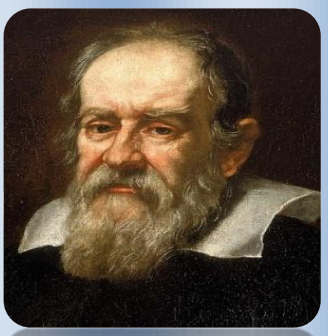


In mathematics the art of proposing a question must be held of higher value than solving it

— **Georg Cantor**

It is clear that the chief end of mathematical study must be to make the students think

— **John Wesley Young**



Nature is written in mathematical language

— **Galileo Galilei**

Mathematics has beauty and romance. It's not a boring place to be, the mathematical world. It's an extraordinary place; it's worth spending time there

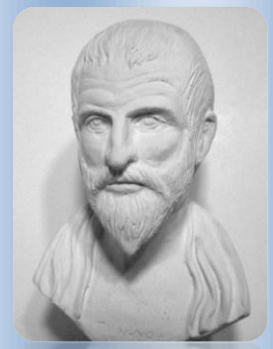
— **Marcus du Sautoy**

To me, mathematics, computer science, and the arts are insanely related. They're all creative expressions

— **Sebastian Thrun**

The study of mathematics, like the Nile, begins in minuteness but ends in magnificence

— **Charles Caleb Colton**

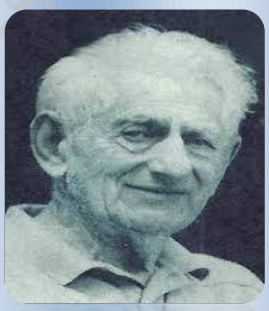


Wherever there is number, there is beauty

— **Proclus**

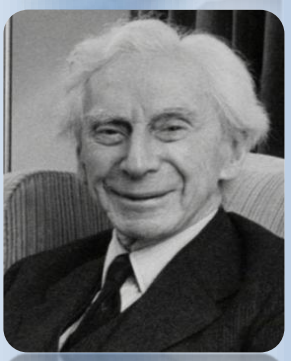
Mathematics is not a careful march down a well-cleared highway, but a journey into a strange wilderness, where the explorers often get lost. Rigor should be a signal to the historians that the maps have been made, and the real explorers have gone elsewhere

— W.S. Anglin



One of the endlessly alluring aspects of mathematics is that its thorniest paradoxes have a way of blooming into beautiful theories

— Philip J. Davis

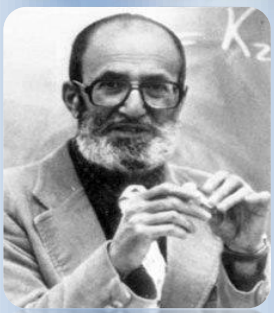


The pure mathematician, like the musician, is a free creator of his world of ordered beauty

— Bertrand Russell

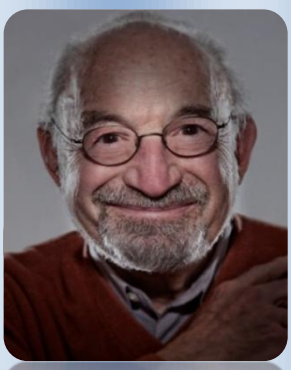
Just because we can't find a solution, it doesn't mean there isn't one

— Andrew Wiles



The only way to learn mathematics is to do mathematics

— Paul R. Halmos



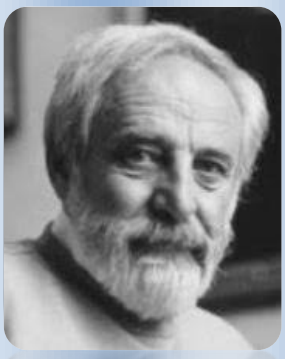
The essence of math is not to make simple things complicated, but to make complicated things simple

— **Stan Gudder**

If people do not believe that mathematics is simple, it is only because they do not realize how complicated life is — **John von Neumann**

Mathematics consists of proving the most obvious thing in the least obvious way

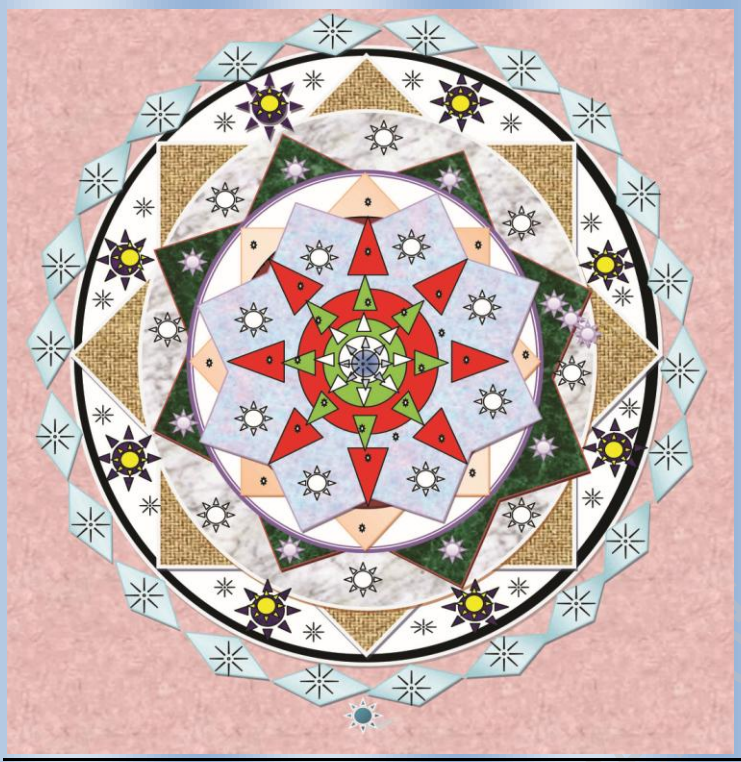
— **George Pólya**



There are two ways to do great mathematics. The first is to be smarter than everybody else. The second way is to be stupider than everybody else but persistent

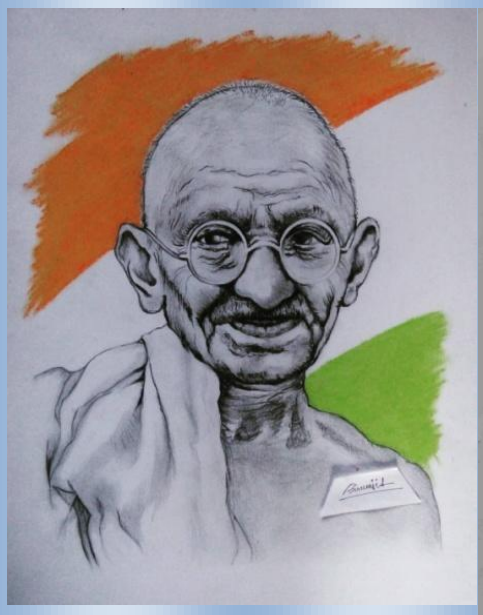
— **Raoul Bott**

Art Gallery

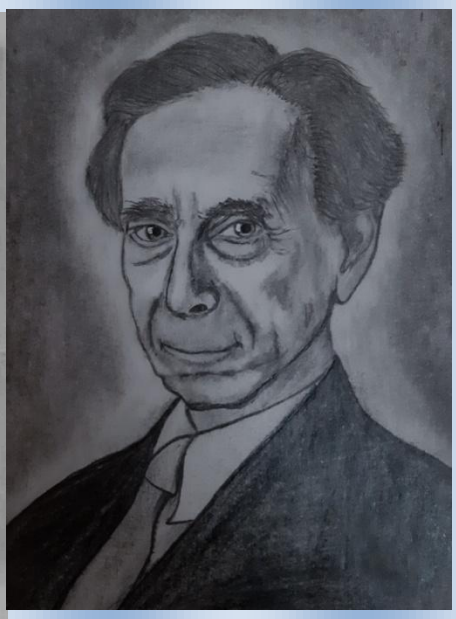


Mandela Art by Jasmine Rabha

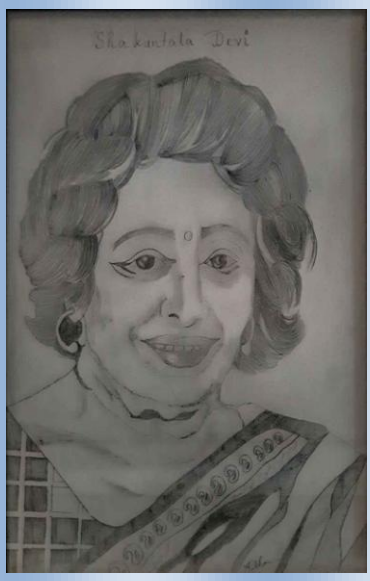
Art by Dhanjit Singha



Art by Biswajit Das

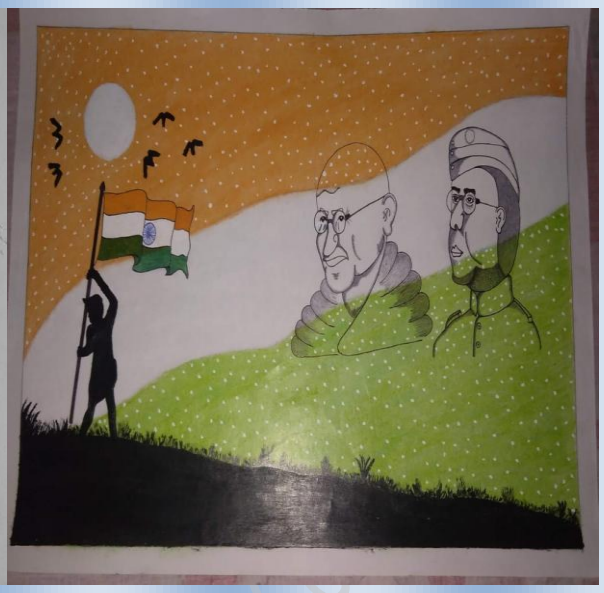


Art by Manosh Jyoti Rabha



Art by Jasmine Rabha

Art by Biswajit Das



Art by Mintu Saod

Art by Manosh Jyoti Rabha

Art by Biswajit Das

Events :

Cultural Rally

Mahoho (মহো-হো) 2017

Under the Sal Tree (To tribute Sukrasarya Rabha) 2018

মৃত শিল্প

ভাগৱত যাত্রা (2022)

ভাওনা সংস্কৃতি (2023)

Faculties (Profile photo)

Dr. Bidyut Kalita

Dr. Mridul Dutta

Mr. Tusar Kanti. Das

Miss Jasmine Rabha

Mr. Manosh Jyoti Rabha

Mr. Dhajendra Rabha

About Mathematics Department

The Department of Mathematics at Dudhnoi College was established in 1976 and offered mathematics as a general course at the H.S. level. The subject's core course first began in 1990. The department is currently expanding its staff of teachers. There are now 60 seats available in our department for undergraduate mathematics courses (general and honors). The department has 200 students who were enrolled in degree-granting classes that include both major and general education requirements. The department's goal is to help students develop a conceptual grasp of the nature, structure, processes, and applications of mathematics so that they are better equipped to meet the difficulties in life. The department regularly organizes its departmental seminars, annual parent-teachers-students meet, alumni meet, students' counseling sessions, departmental educational tours, and outings in addition to its regular co-curricular activities like welcoming new students, bidding them farewell, and celebrating Teachers' Day.

The department's tiny library contains more than 300 books and a few journals on mathematics that are continually available to students to meet their intellectual demands. The students have access to books that they can borrow, and there is space for eight to ten pupils to study and consult.

There are also more than enough computers available with high-speed internet for academic purposes. To commemorate Srinivasa Ramanujan's birthday on December 22, a wall magazine is released every year. The department also features a lab for doing practicals with Mathematica software. Two guest lecturers and three full-time Assistant professors have improved the mathematics department as of right now. The department maintains an award system (cash awards) for the students who obtained 80% and above in semesters in order to improve and motivate the pupils.

Name of Permanent Faculties:

1. Mr. Amrit Kalita (Retired HOD)
2. Mr. Kalayan Borpuzari (Retired HOD)
3. Mr. Dilip Saha (Expired before retirement)
4. Dr. Bidyut Kalita. (Present HOD)
5. Dr. Mridul Dutta.
6. Dr. Bharat Borah (Expired before retirement)
7. Mr.Tusar Kanti Das.

Name of Guest Faculties:

1. Miss Jasmine Rabha
2. Mr. Manosh Jyoti Rabha (leave)
3. Mr. Dhajendra Rabha

Achievements

1. **Biduyt Kalita completed Doctorate Degree in 2012.**
2. **Mridul Dutta completed Doctorate Degree in 2022.**
3. **Anindita and Dhajandra Rabha doing PhD.**
4. **Dhajandra Rabha holds NET.**
5. **Manosh Jyoti Rabha secures 2nd position under GU in 2018 (B.A).**
6. **Samaj Rabha secure 1st position under GU in 2020(B.A.) .**
7. **Parag Jyoti Kalita has qualified JAM in 2023.**
8. **Total no. of students doing higher education are 42 (2017-2023).**
9. **Total no. of students job holders 20 (2017-2023)..**

Some Photography click by our Faculties and Students

Captured by:
Biswajit Das

Captured by:
Abhijyoti Khakhalary

Captured by:
Manosh Jyoti Rabha

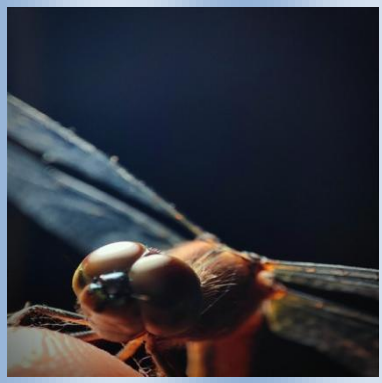
Captured by:
Rupjyoti Kalita

Captured by:
Tohidur Rahman

Captured by:
Manosh Jyoti Rabha

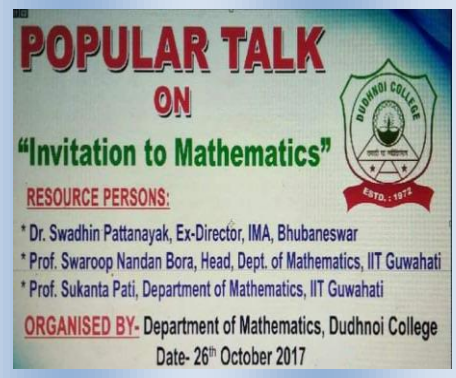
Captured by:
Sundaram Rabha

Captured by:
Lakhyajit Nath



Captured by:
Lakhyajit Nath

Some Snapshots




HAPPY TEACHER'S DAY


GPS Map Camera
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XQRP+22R, Dudhnoi, Assam 783124, India
Lat 25.990161°
Long 90.784917°
17/11/22 09:29 AM GMT +05:30
Google


GPS Map Camera
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Long 90.784908°
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Google


INFINITY
DEPT. OF MATHEMATICS


Alumni Meet 2022
DEPARTMENT OF MATHEMATICS
Dudhnoi College
GLORIOUS
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INFINITY
PT. OF MATHEMATI

List Of Contributors:

Manosh Jyoti Rabha

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Subarna Banik 1

Nure Jannat 2

Tubulu Nath 3

Junmoni Kalita 4

Bidyut Kalita 5

Nirob Jyoti Rabha 6

Sundaram Rabha 7, 35

Rupjyoti Kalita 8

Dhajendra Rabha 9

Ashim kr. Rabha 10

Digambar Rabha 10

Abhijyoti Khakhalary 11

Mintu Sauod 19

Jasmine Rabha 23

Tohidur Rahman 24

ধন্যবাদ !