

2018-19

Students Seminar



Babar Khan, student of B.Sc.II year delivering seminar on “Theorems on Linear transformation  $T$  With respect to basis  $B$ ”.



Ku. Puja Kolhe, student of B.Sc. Final year delivering seminar on “Isomorphism of Vectors spaces”.

## Quiz Competition

Student of B.Sc. S.Y. Present during the “Quiz Competition Activity”



### Group Discussion Activity

Students of B.Sc. S.Y. Present during the “Group Discussion Activity”



## National Mathematics Day

On the occasion of National Mathematics Day, Undergraduate Mathematics students watched the documentary "The Man Who Knew Infinity".



## Guest Lecture

Mr. Pramod Gayakwad, an assistant professor of mathematics. At School of Mathematical Sciences, Swami Ramanand Teerth Marathwada University, Nanded. Delivered guest lecture on **Importance of Mathematics** to undergraduate Mathematics students.

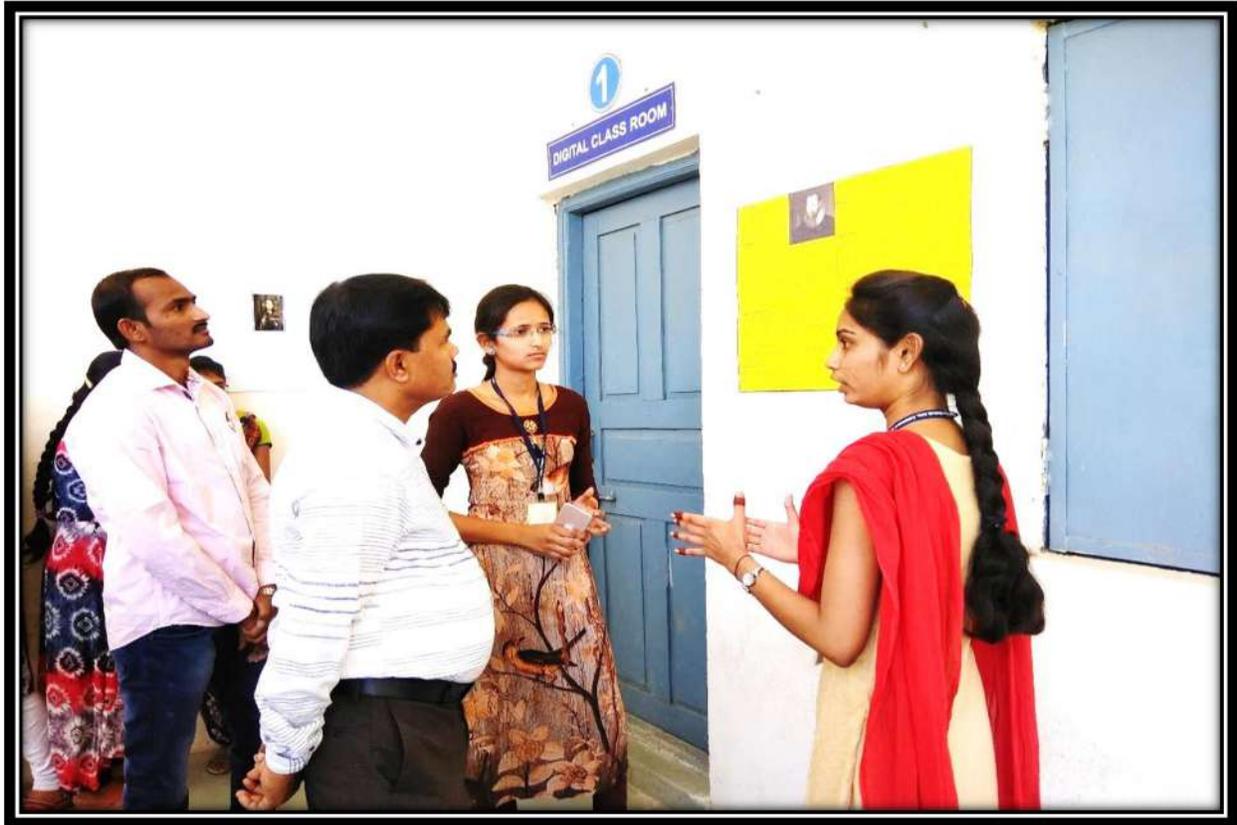


## $\pi$ Day

Shri. S. J. Chavhan, Assistant Professor and Head, Dept. of Mathematics Shri Vyankatesh College, Deulgaon Raja. Delivered his lecture on History of pi on the occasion of  $\pi$  day.



## Poster Presentation Competition



Shubhangi More and Neha Sisode explain their poster to Principal Dr. G.B. Jadhav sir.



Vishakha Magar and Sanjivni Kharde explain their poster to Principal Dr. G.B. Jadhav sir, Dr. S. D. Chavan sir.

2019-20

**National Mathematics Day (22-Dec-2019)**



On the occasion of National Mathematics Day, Mr. S. J. Chavhan has been delivering a welcome speech.



Chief Guest Dr. B. E. Ghonge addressing the students on the occasion of National Mathematics Day.

## National Science Day (28 Feb 2020)



Prin. Dr. G. B. Jadhav have been giving remarkable speech on the occasion of National science day.



Chief Guest Dr. D.S. Talwankar sir addressing the students on the occasion of National Science day.



Vishakha Magar presenting poster on Euclidian Geometry to Prin. Dr. G.B. Jadhav sir and Guest Dr. D.S. Talwankar sir.



Shatakshi Jadhav and Vaishnavi Kapse are presenting the poster on The Human Calculus to Prin. Dr G.B. Jadhav sir and Guest Dr D.S. Talwankar sir.



Prajakta Deshmukh presenting poster on Srinivasa Ramanujan: A Remarkable Mathematical Genius to Prin. Dr G.B. Jadhav sir and Guest Dr D.S. Talwankar sir.



Rahul Bankar presenting poster on Srinivasa Ramanujan Magic Square to Prin. Dr G.B. Jadhav sir and Guest Dr D.S. Talwankar sir.

## Students Seminar



Asif Shah, student of B.Sc.II year delivering seminar on “Integral Domain”.



2020-21

## National Webinar on Recent Trends in Fuzzy Sets, Rough Sets Theory and Material Science.

Dr. S.R. Chaudhari, Professor and Director, School of Mathematical Science, KBC North Maharashtra University, Jalgaon, was called as a resource person and spoke about Recent Trends in Fuzzy Sets and Rough Sets Theory during some peeks of the national webinar.

Shri Belaji Sansthan, Deulgaon Raja's  
**SHRI VYANKATESH COLLEGE, DEULGAON RAJA**  
One Day National Webinar on  
**RECENT TRENDS IN ROUGH SET, FUZZY SET THEORY & MATERIAL SCIENCE**  
SATURDAY, 08 AUG 2020, 12.00 A.M.  
ORGANIZED BY : DEPT. OF MATHEMATICS IN COLLABORATION WITH IQAC

Patron Inaugurator Resource Person Resource Person

12:31  
Rough sets, Fuzzy sets, Soft sets and their relationships.pptx

**Rough Sets, Fuzzy sets, Soft sets and their relationship**

S. R. Chaudhari  
Department of Mathematics  
School of Mathematical Sciences

16:29 / 30:44

12:49  
A subset  $X \subseteq U$  is called a **rough set**, if  $R^*(X) - R_*(X) \neq \emptyset$ .

U U  
Y1 Y2 Y3 Y4 Y5 Y6 Y1 Y2 Y3 Y4 Y5 Y6

13:11  
Rough sets, Fuzzy sets, Soft sets and their relationships.pptx

Patient	Headache	Muscle pain	Temperature	Flu
$x_1$	yes	yes	Medium	yes
$x_2$	no	yes	No	yes
$x_3$	no	yes	No	no
$x_4$	yes	no	high	no
$x_5$	yes	yes	low	no

• If  $X = \{x_1, x_2, x_3\}$ , then for  $R$  : Headache and Muscle pain, we have  $U/R = \{\{x_1, x_3\}, \{x_2, x_3\}, \{x_3\}\}$ .  
Here,  $R_*(X) = \{x_1, x_2, x_3\}$  and

National Webinar  
**What are basic rules of scientific research?**

1. Scientific research should be original
2. Based on the basic rules
3. Research on the basis of current literature
4. Presentation with well known data
5. What is novelty
6. Potential of research work
7. Work should be eco-friendly and useful for society
8. After presentation some claims
9. Results of project should be proper with proof

National Webinar  
Fig. 107 The membership function for a fuzzy set and its corresponding graph. The graph is a polynomial approximation for the fuzzy set.

## National Mathematics Day (22 Dec 2020)

The invited resource speaker was Prof. Sharad Kadam, Assistant Professor in the Department of Mathematics at Shri Shivaji College in Parbhani. He spoke on The Basic Concepts in Number Theory and Its Applications.

The top-left screenshot shows a slide titled "Euclidean Algorithm" with the following text: "Let a and b be two integers whose greatest common divisor is desired. Since  $\gcd(a, |b|) = \gcd(a, b)$ , there is no harm in assuming that  $a \geq b > 0$ . The first step is to apply the Division Algorithm to a and b to get  $a = q_1b + r_1, 0 \leq r_1 < b$ . If it happens that  $r_1 = 0$ , then  $b \mid a$  and  $\gcd(a, b) = b$ . When  $r_1 \neq 0$  divide b by  $r_1$  to produce integers  $q_2$  and  $r_2$  satisfying  $b = q_2r_1 + r_2, 0 \leq r_2 < r_1$ . If  $r_2 = 0$ , then we stop; otherwise, proceed as before to obtain  $r_1 = q_3r_2 + r_3, 0 \leq r_3 < r_2$ .

The top-right screenshot shows a slide titled "Divisibility" with the text: "An integer b is said to be divisible by an integer  $a \neq 0$ , in symbols  $a \mid b$ , if there exists some integer c such that  $b = ac$ . We write  $a \nmid b$  to indicate that b is not divisible by a." It includes examples:  $5 \mid 35$  (since  $35 = 5 \times 7$ ) and  $7 \nmid 22$  (since  $22 = 7c + 1$  for some integer c).

The bottom-left screenshot shows a slide titled "Least Common Multiple" with the text: "The least common multiple of two non zero integers a and b, denoted by  $\text{lcm}(a, b)$ , is the positive integer m satisfying: 1. a | m and b | m; 2. If a | c and b | c, with  $c > 0$ , then  $m \mid c$ ." It also includes a note: "Note: We have  $\gcd(a, b) \cdot \text{lcm}(a, b) = a \cdot b$ ."

The bottom-right screenshot shows a slide titled "Example" with the text: "Now we will find  $\gcd(12378, 3064)$ . The successive applications of the Division Algorithm produce the equations:  $12378 = 4 \cdot 3064 + 3622$ ,  $3064 = 8 \cdot 362 + 1080$ ,  $362 = 3 \cdot 1080 + 24$ ,  $1080 = 45 \cdot 24 + 0$ . Thus  $\gcd(12378, 3064) = 24$ ." It also features a logo of Shri Shivaji College, Parbhani.

## National Science Day (28-Feb-2021)

The invited speaker is Dr. C.S. Khodre, an assistant professor and the head of the mathematics department at the Late B.S.N.G.A.G. College in Sakharkheda. He talks about the topic of complex analysis and its uses.

The screenshot shows a Zoom meeting with four slides displayed in a 2x2 grid. Each slide includes a small video thumbnail of the speaker, Dr. C.S. Khodre.

- Top Left Slide: Modulus or Absolute Values**  
 Definition: The modulus or absolute value of  $z = x + iy$ , denoted by  $|z|$ , is the real number  $|z| = \sqrt{x^2 + y^2}$ .  
 Example: Express  $z = -4 + 3i$  and find modulus value of  $z$ .  
 $|z| = \sqrt{3^2 + 4^2} = 5$   
 A diagram shows a point  $z$  in the complex plane with coordinates  $(x, y)$  and a right-angled triangle formed with the axes.
- Top Right Slide: Complex Conjugate**  
 Suppose  $z = x + iy, \bar{z} = x - iy$ , and  
 $z_1 + z_2 = \bar{z}_1 + \bar{z}_2$   
 $z_1 - z_2 = \bar{z}_1 - \bar{z}_2$   
 $\bar{z}_1 z_2 = \overline{z_1 z_2}$   
 $\overline{\left(\frac{z_1}{z_2}\right)} = \frac{\bar{z}_1}{\bar{z}_2}$
- Bottom Left Slide: Arithmetic Operations**  
 Suppose  $z_1 = x_1 + iy_1, z_2 = x_2 + iy_2$   
 $z_1 + z_2 = (x_1 + x_2) + i(y_1 + y_2)$   
 $z_1 - z_2 = (x_1 - x_2) + i(y_1 - y_2)$   
 $z_1 z_2 = (x_1 x_2 - y_1 y_2) + i(y_1 x_2 + x_1 y_2)$   
 $\frac{z_1}{z_2} = \frac{x_1 x_2 + y_1 y_2 + i(y_1 x_2 - x_1 y_2)}{x_2^2 + y_2^2}$   
 $\frac{z_2}{z_1} = \frac{x_2^2 + y_2^2}{x_1^2 + y_1^2}$
- Bottom Right Slide: 1.1 Complex Numbers**  
 DEFINITION 1.1: **Complex Number**  
 A complex number is any number of the form  $z = a + ib$  where  $a$  and  $b$  are real numbers and  $i$  is the imaginary unit.  
 In  $z = x + iy$ , the real number  $x$  is called the real part and  $y$  is called the imaginary part.  
 $\text{Re}(z) = x, \text{Im}(z) = y$   
 Also the complex number is defined as the ordered pair  $(x, y)$  of real numbers i.e.  $z = (x, y)$ .

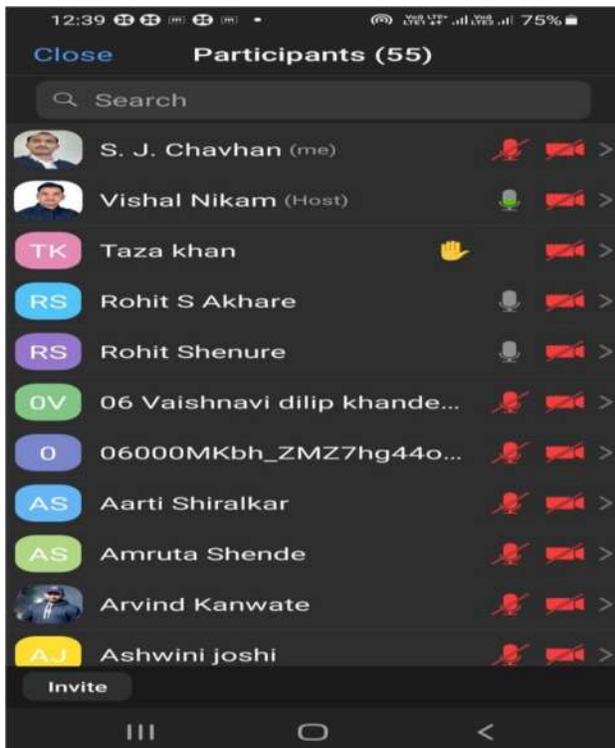
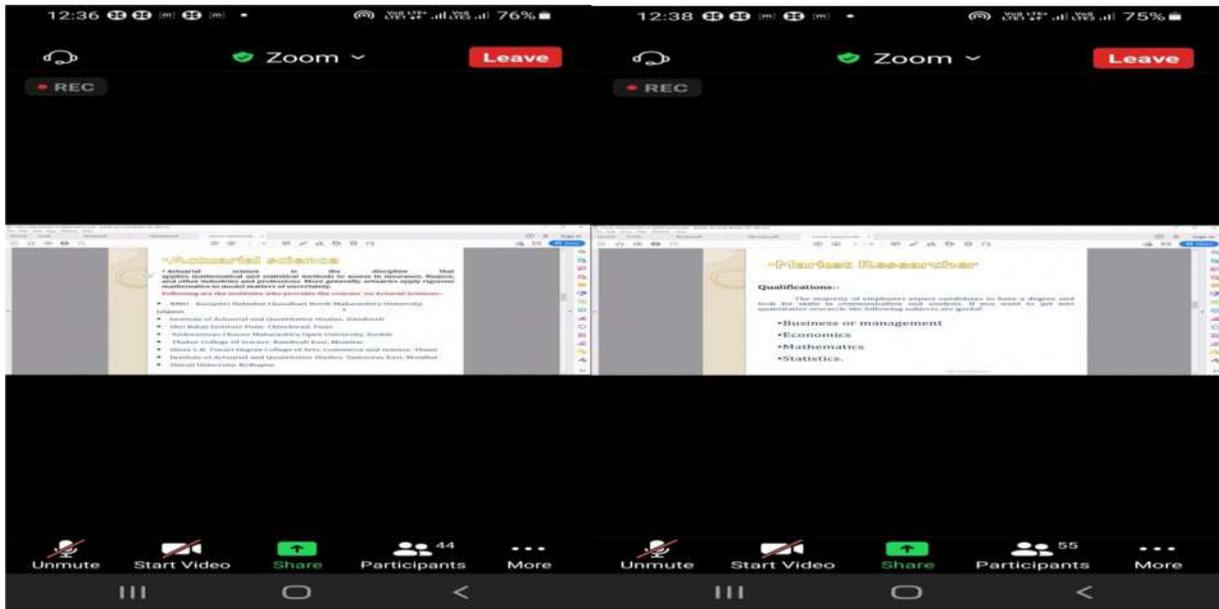
The screenshot shows a Zoom meeting with three slides displayed in a 2x2 grid. The top-left position is occupied by a video thumbnail of the speaker, Dr. C.S. Khodre.

- Top Right Slide: Analyticity at a Point**  
 DEFINITION 1.2: **Analyticity at a Point**  
 A complex function  $w = f(z)$  is said to be **analytic at a point  $z_0$** , if it is differentiable at  $z_0$  and at every point in some neighborhood of  $z_0$ .  
 A function is analytic at every point  $z$  is said to be an **entire function**. Polynomial functions are entire functions.
- Bottom Left Slide: Fig 1.6**  
 (a)  $z$ -plane: A vertical line representing the imaginary axis  $x = 0$ .  
 (b)  $w$ -plane: A semi-circle in the right half-plane with radius  $r = 1$  and  $\theta = \pi/4$ .  
 The diagram shows the mapping of the imaginary axis from the  $z$ -plane to the  $w$ -plane.
- Bottom Right Slide: Fig 1.5**  
 (a)  $z$ -plane: A region in the complex plane representing the domain of a function  $f$ .  
 (b)  $w$ -plane: The corresponding image of the domain under the function  $f$ .  
 A point  $z_0$  in the domain is mapped to a point  $w_0$  in the image.

2021-22

### National Mathematics Day (22-Dec-2020)

Prof. Vishal E. Nikam, Head & Assistant Professor, Department of Mathematics, Arts, Commerce and Science College, Onde, Vikramgad, Dist. Palghar, delivered guest lecture on **Career Opportunities in Mathematics** dated December 23, 2021, on the occasion of National Mathematics Day.



## National Science day (28-Feb-2022)

Prof. Ashok Thombre, assistant professor in the Department of Mathematics at the Bhivrabai Sawant Institute of Technology & Research in Wagholi, Pune, had delivered guest lecture on **Applications of Mathematics in a Real Life** on the occasion of National Science day.

2. Once there were 3 Friends. They went to restaurant .  
They had some tea there. Their bill was 75 Rs.  
Everyone paid 25 rupees. So  $25+25+25=75$  . Waiter took that money to manger. Manager took 70 rupees and waitre took 2 rupees. He gave 3 rupees to friends back. So they each got 1 rupee back.. That means they each paid 24 rupees.  $24+24+24=72$  . If we will add the money taken by the waiter is  $72+2=74$  . So who had taken ONE rupee?

Handwritten notes in red ink include a grid of numbers, calculations like  $24+24+24=72$ , and a final calculation  $72+2=74$ . A blue bar obscures the bottom of the slide.

Participants list:

- Ashok Thombre
- Pavni Kadam
- Sopan Chitambar Math...
- Jyoti Dhokale
- Aarti Shiralkar
- Korin Kotkar
- Prajwal Pandit

$$\int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}$$
$$f(x) = a_0 + \sum_{n=1}^{\infty} \left( a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right)$$
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

FIRST REACTION

A video thumbnail shows a man in a pirate hat (Jack Sparrow) with a surprised expression.

Participants list:

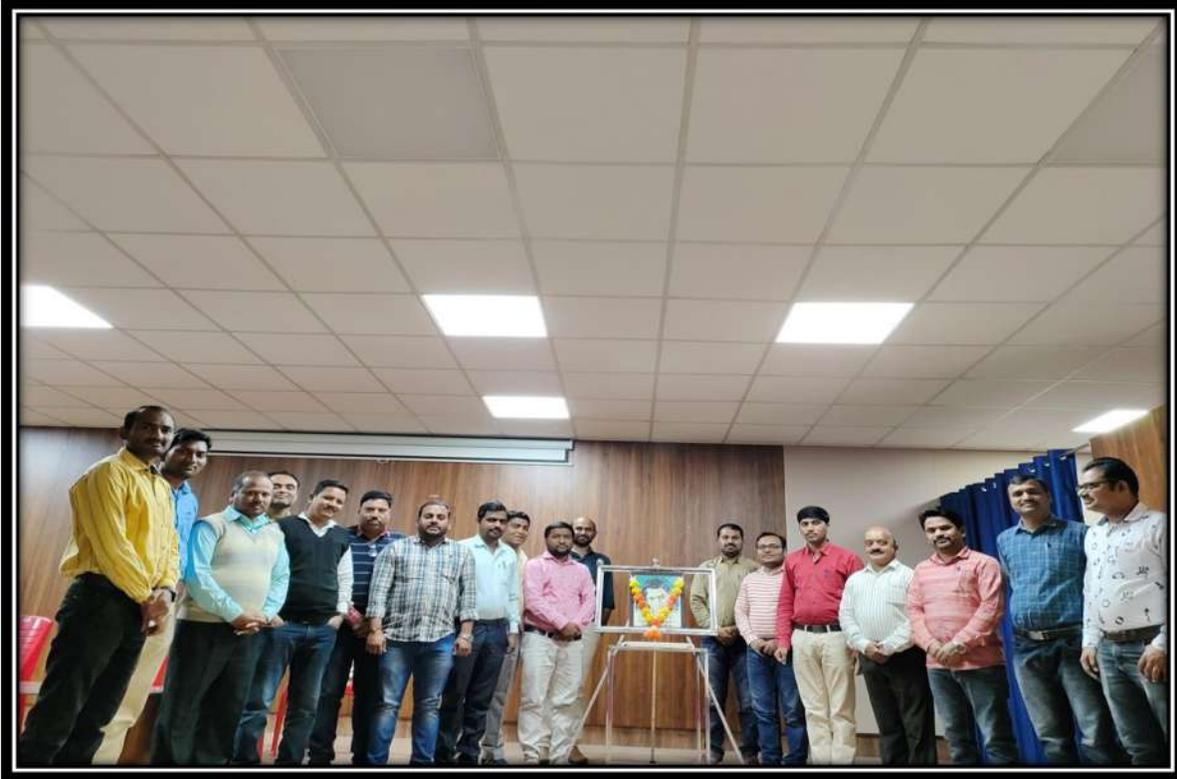
- Ashok Thombre

Zoom controls at the bottom: Unmute, Start Video, Security, Participants (20), Chat, Share Screen, Pause/Stop Recording, Reactions, Apps, More, End.

2022-23

**National Mathematics Day (22-Dec-2022)**

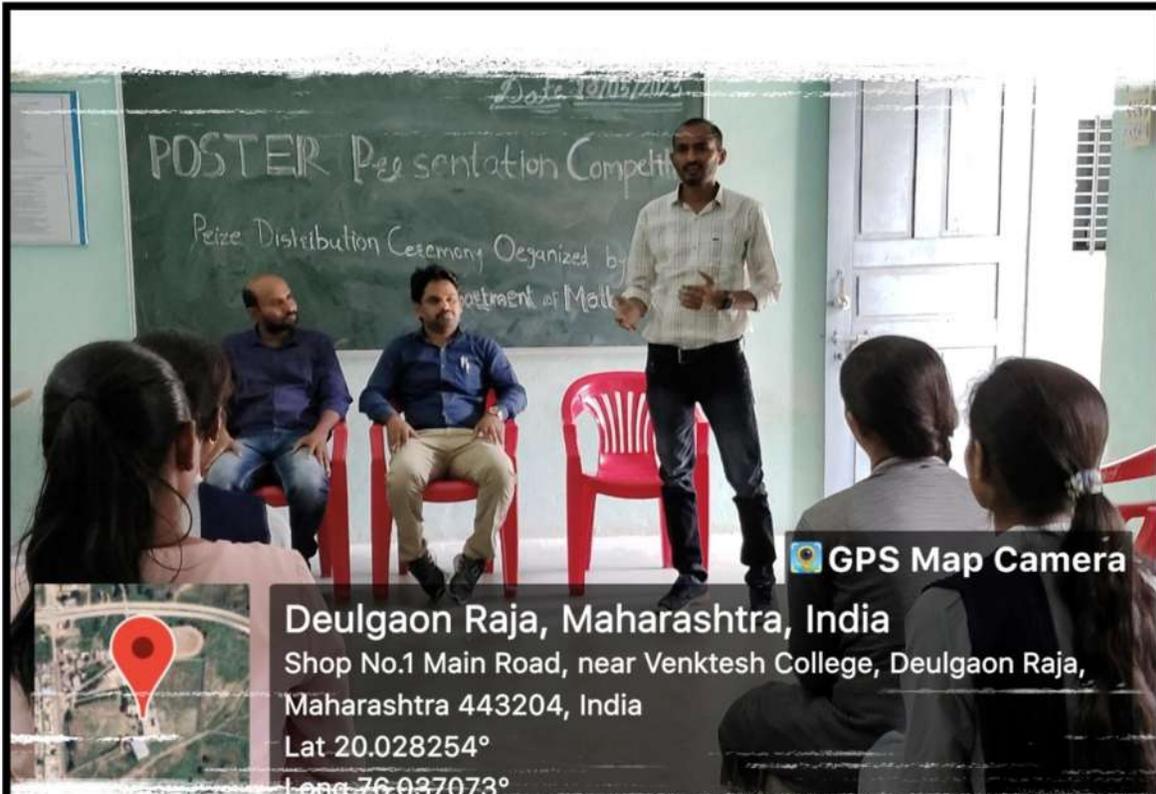
College staff and Students are tribute to Shrinivasa Ramanujan on his birth anniversary.



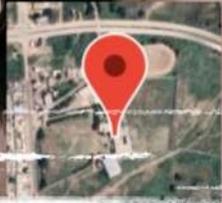
## Poster Presentation Competition

On the occasion of National Science Day, the Department of Mathematics held a poster presentation competition for undergraduate mathematics students. Chief Guest Prof. B. U. Kale and Dr. A. D. Kanwate selected students for first and second place. Sunanda Kuhire won first prize, while Madhavi Khaire came in second. The first award consists of a certificate worth 1001 Rs, while the second prize consists of a certificate and 501 Rs.





GPS Map Camera



Deulgaon Raja, Maharashtra, India

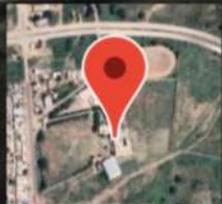
Shop No.1 Main Road, near Venkatesh College, Deulgaon Raja,  
Maharashtra 443204, India

Lat 20.028254°

Long 76.037073°



GPS Map Camera



Deulgaon Raja, Maharashtra, India

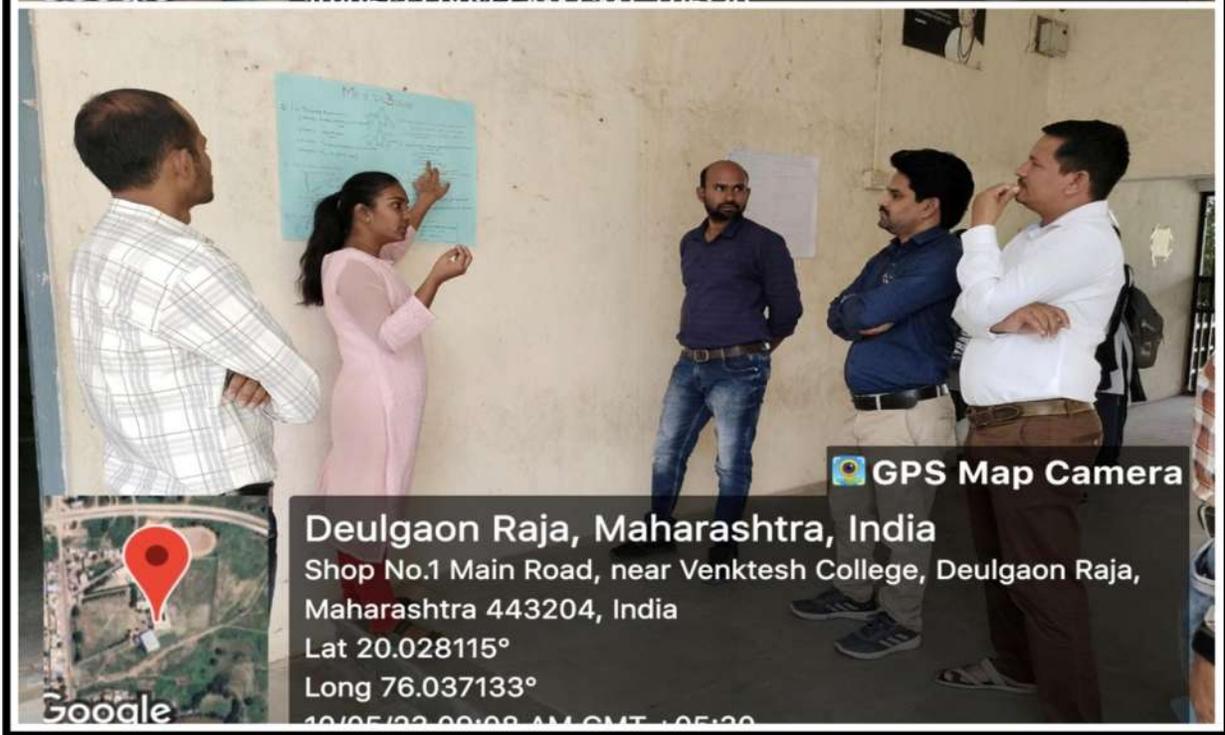
Shop No.1 Main Road, near Venkatesh College, Deulgaon Raja,  
Maharashtra 443204, India

Lat 20.028254°

Long 76.037073°

Google

10/05/23 10:15 AM GMT+05:30



Manasvi khandare and Madhavi Khaire Presenting poster to Prof. B. U. Kale and Dr. A. D. Kanwate



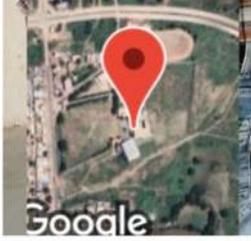
GPS Map Camera



**Deulgaon Raja, Maharashtra, India**  
Shop No.1 Main Road, near Venktesh College, Deulgaon Raja,  
Maharashtra 443204, India  
Lat 20.028095°  
Long 76.037079°  
19/05/22 09:18 AM GMT +05:30



GPS Map Camera



**Deulgaon Raja, Maharashtra, India**  
Shop No.1 Main Road, near Venktesh College, Deulgaon Raja,  
Maharashtra 443204, India  
Lat 20.028124°  
Long 76.03707°  
19/05/22 09:14 AM GMT +05:30

## Quiz Competition

Students of UG Mathematics are giving the quiz on Modern algebra.



## Redord Test

Conducted Record Tests for UG Mathematics students.

