

GOVERNMENT ARTS COLLEGE (AUTONOMOUS)

Rajahmundry, Andhra Pradesh

NAAC Accredited

DEPARTMENT OF MATHEMATICS

DETAILED ACTIVITY REPORT

ON

LAB ON WHEELS

(HI-GLOW Programme)

Venue: APTW Residential School, Maredumilli
Alluri Sitarama Raju Mandal, East Godavari District

Date: 17th September 2025

Report Prepared by:

Sri G. Chandrasekhar

Head, Department of Mathematics
Government Arts College (Autonomous), Rajahmundry

1. DEPARTMENT MEETING MINUTES

Meeting No.	DM/MATHS/2025-26/03
Date	10th September 2025
Time	11:00 AM
Venue	Department of Mathematics, Government Arts College (Autonomous), Rajahmundry
Presided by	Sri G. Chandrasekhar, Head, Department of Mathematics

Members Present

- Sri G. Chandrasekhar – Head, Department of Mathematics (Chairman)
- Dr. RK Ramachandra – Principal, Government Arts College (Autonomous), Rajahmundry
- Sri K. Subrahmanyam – Assistant Professor, Department of Mathematics
- Smt. P. Sarada Devi – Assistant Professor, Department of Mathematics
- Sri M. Venkata Rao – Assistant Professor, Department of Mathematics
- Sri B. Srinivasa Rao – Assistant Professor, Department of Mathematics
- Two student representatives from B.Sc. (Mathematics) Programme

Agenda Items Discussed

1. Proposal of the 'Lab on Wheels' outreach programme under the HI-GLOW initiative to APTW Residential School, Maredumilli.
2. Identification of resource persons and student volunteers from the Department.
3. Planning of mathematical activities, topics, and demonstration models (including Golden Ratio).
4. Date and logistics for the visit.
5. Conduct of Mathematics Talent Hunt Test on the occasion of Riemann's Birthday (17th September 2025).
6. Prizes and incentives for talented students.
7. Any other matters with the permission of the Chair.

Resolutions Passed

- It was unanimously resolved to conduct the 'Lab on Wheels' programme at APTW Residential School, Maredumilli on 17th September 2025.
- Sri G. Chandrasekhar, HoD, will lead the team and present the Golden Ratio models to 10th class students.
- Faculty members and student volunteers from Degree classes will conduct sessions for students from Classes 3 to 10.
- Mathematics Talent Hunt Test will be conducted for students up to Class 9 to celebrate Riemann's Birthday.

- First prize: Rs. 500/- and Second prizes (4 students): Rs. 300/- each, to be distributed by the School Principal and college faculty.
- The HoD was authorized to submit a formal permission letter to the Principal of the college.

Signature of HoD: _____

Sri G. Chandrasekhar

Head, Department of Mathematics

Government Arts College (Autonomous), Rajahmundry

2. PERMISSION LETTER TO PRINCIPAL

From:

Sri G. Chandrasekhar
Head, Department of Mathematics
Government Arts College (Autonomous)
Rajahmundry – 533 105
Date: 11th September 2025

To:

Dr. RK Ramachandra
Principal
Government Arts College (Autonomous)
Rajahmundry – 533 105

Sub: Request for permission to conduct 'Lab on Wheels' outreach programme at APTW Residential School, Maredumilli – reg.

Respected Sir,

I, on behalf of the Department of Mathematics, humbly request your kind permission to conduct the 'Lab on Wheels' programme (under the HI-GLOW initiative) at the APTW Residential School, Maredumilli, Alluri Sitarama Raju Mandal, East Godavari District on 17th September 2025 (Wednesday).

The objective of this outreach activity is to take mathematical learning beyond the college campus and provide quality, activity-based mathematics education to tribal and rural school students who may not otherwise have access to such resources.

Details of the Programme:

- Programme Name: Lab on Wheels (HI-GLOW)
- Venue: APTW Residential School, Maredumilli
- Date: 17th September 2025
- Target Students: Classes 3 to 10 (Approximately 622 students)
- Key Activity: Demonstration of Golden Ratio Models, Mathematics sessions on difficult topics, Talent Hunt Test
- Special Occasion: Celebrated as Riemann's Birthday

I assure you that this programme will be conducted in a disciplined and productive manner and will not interfere with the regular college schedule. The team of faculty and student volunteers will represent the institution with utmost responsibility.

Kindly grant permission and necessary support for the successful conduct of this programme.

Thanking you,
Yours faithfully,

(Sri G. Chandrasekhar)

Head, Department of Mathematics

Government Arts College (Autonomous), Rajahmundry

Approved by the Principal: _____ Date: _____

3. INTIMATION TO IQAC

From:

Sri G. Chandrasekhar
Head, Department of Mathematics
Government Arts College (Autonomous), Rajahmundry
Date: 12th September 2025

To:

The IQAC Coordinator
Internal Quality Assurance Cell (IQAC)
Government Arts College (Autonomous)
Rajahmundry – 533 105

Sub: Intimation regarding conduct of Extension Activity – 'Lab on Wheels' (HI-GLOW) – reg.

Dear Sir/Madam,

This is to formally intimate the IQAC about the upcoming Extension / Outreach Activity being organized by the Department of Mathematics under the HI-GLOW (Lab on Wheels) Programme.

Activity Name	Lab on Wheels – HI-GLOW Mathematics Outreach
Organizing Department	Department of Mathematics
Date of Activity	17th September 2025
Venue	APTW Residential School, Maredumilli, Alluri Sitarama Raju Mandal
Beneficiaries	School students from Classes 3 to 10
Expected Participation	622 School Students
Activity Type	Extension / Community Outreach / Experiential Learning
NAAC Criterion	Criterion II (Teaching-Learning & Evaluation), Criterion III (Research, Extension & Outreach)
SDG Alignment	SDG 4 – Quality Education
Faculty In-Charge	Sri G. Chandrasekhar, HoD Mathematics

Kindly record this activity under the relevant NAAC criteria for the current academic year 2025-26 and include it in the IQAC reports, AQAR, and SSR as applicable.

Post-event documentation including photographs, attendance, feedback forms, and newspaper clippings will be submitted to the IQAC office within 7 days of the event.

Yours sincerely,

(Sri G. Chandrasekhar)

Head, Department of Mathematics

4. CIRCULAR TO STUDENTS

GOVERNMENT ARTS COLLEGE (AUTONOMOUS), RAJAHMUNDRY

DEPARTMENT OF MATHEMATICS

CIRCULAR NO: MATHS/2025-26/CIR/02 | DATE: 13th September 2025

CALL FOR STUDENT VOLUNTEERS

LAB ON WHEELS – HI-GLOW OUTREACH PROGRAMME

All students of the Department of Mathematics (B.Sc. I, II, III Year) are hereby informed that the Department is organizing the 'Lab on Wheels' programme under the HI-GLOW initiative as an outreach activity.

Programme Details:

- Date: 17th September 2025 (Wednesday)
- Venue: APTW Residential School, Maredumilli, Alluri Sitarama Raju Mandal
- Reporting Time: 7:00 AM at College Main Gate
- Beneficiaries: School children from Classes 3 to 10

What You Will Do:

- Conduct interactive mathematics sessions for school students
- Demonstrate mathematical models and concepts
- Assist in organizing the Mathematics Talent Hunt Test
- Help distribute prizes to winners

This is a wonderful opportunity for you to:

- Develop communication and teaching skills
- Contribute to quality education for underprivileged students
- Earn community service/extension activity credit
- Participate in a college-level outreach event

Interested students are requested to register their names with the Department on or before 15th September 2025. Limited seats are available. First-come, first-served basis. Travel arrangements will be made by the Department.

For further details, contact: Sri G. Chandrasekhar, Head, Department of Mathematics.

(Sri G. Chandrasekhar)

Head, Department of Mathematics

5. DETAILED REPORT OF THE PROGRAMME

5.1 Programme Overview

Programme Name	Lab on Wheels – HI-GLOW Mathematics Outreach
Organized by	Department of Mathematics, Govt. Arts College (Autonomous), Rajahmundry
Date	17th September 2025 (Wednesday)
Venue	APTW Residential School, Maredumilli, Alluri Sitarama Raju Mandal, East Godavari District
Time	9:00 AM to 4:00 PM
Total Beneficiaries	622 School Students (Classes 3 to 10)
Faculty Coordinator	Sri G. Chandrasekhar, Head, Department of Mathematics
School Principal	Sri G. Venkaiah, Principal, APTW Residential School, Maredumilli
College Principal	Dr. RK Ramachandra, Principal, Govt. Arts College (Autonomous)
Special Occasion	Celebrated on Riemann's Birthday

5.2 Introduction

The Department of Mathematics, Government Arts College (Autonomous), Rajahmundry has been consistently working towards extending quality mathematics education beyond the walls of the college. The 'Lab on Wheels' programme, conducted under the HI-GLOW initiative, is one such landmark outreach activity where the department takes its expertise, models, and teaching resources directly to remote schools.

On 17th September 2025, the Department of Mathematics organized this outreach programme at the APTW Residential School, Maredumilli, located in the tribal region of Alluri Sitarama Raju Mandal. This date was specially chosen to coincide with the birthday of the legendary German mathematician Bernhard Riemann, thereby creating greater awareness about mathematical history and inspiring the young students.

5.3 Inauguration and Welcome

The programme commenced at 9:00 AM with a formal welcome by the School Principal, Sri G. Venkaiah, who warmly received the college team. The HoD, Sri G. Chandrasekhar, introduced the concept of the 'Lab on Wheels' programme and its vision of making mathematics accessible and enjoyable for all students, particularly those in rural and tribal areas.

5.4 Key Activities Conducted

A) Golden Ratio Model Demonstration

The HoD, Sri G. Chandrasekhar, personally conducted a special session for the 10th standard students on the 'Golden Ratio' – one of the most fascinating mathematical concepts found in nature, art, and architecture. Using specially prepared physical models, he demonstrated how the golden ratio appears in:

- Natural phenomena like flower petals, shells, and sunflower seeds
- Great architectural structures and paintings
- Human body proportions
- Connection with Fibonacci sequence

The interactive model demonstration enabled the students to visualize and understand abstract mathematical concepts in an engaging and hands-on manner.

B) Interactive Mathematics Sessions (Classes 3 to 10)

Faculty members and Degree student volunteers conducted subject-wise, class-wise interactive sessions for all 622 students from Classes 3 to 10. The sessions focused on simplifying difficult mathematical topics through:

- Innovative shortcut methods and mental math techniques
- Activity-based and visual learning approaches
- Use of mathematical models and demonstrations
- Practice problems with step-by-step explanation

C) Mathematics Talent Hunt Test

In honor of Riemann's Birthday, a Mathematics Talent Hunt Test was conducted for students up to Class 9. The test was designed to identify mathematically gifted students and inspire healthy competition.

5.5 Prize Distribution

S.No	Student Name	Prize	Class	Amount
1	Bachala Kalyan Reddy	First Prize	IX	Rs. 500/-
2	Pallala Varaprasad Reddy	Second Prize	IX	Rs. 300/-
3	Pallala Lakshmi Narasimha Reddy	Second Prize	VIII	Rs. 300/-
4	Ch. JGDS Santosh Reddy	Second Prize	VIII	Rs. 300/-
5	B. Nagireddy	Second Prize	VII	Rs. 300/-

Prizes were distributed by the APTW School Principal, Sri G. Venkaiah, and the Mathematics faculty of Government Arts College.

6. OBJECTIVES OF THE PROGRAMME

6.1 General Objectives

- To take quality mathematics education to the doorsteps of students in rural and tribal areas.
- To bridge the gap between higher education institutions and school education in remote regions.
- To create awareness about the importance and beauty of mathematics among school students.
- To make mathematics more accessible, engaging, and enjoyable through activity-based learning.

6.2 Specific Objectives

- To demonstrate the relevance of mathematical concepts like Golden Ratio in real life, nature, and art.
- To provide simplified methods for solving difficult mathematics problems to students from Class 3 to 10.
- To identify mathematically talented students in tribal schools through a structured Talent Hunt Test.
- To motivate students to pursue mathematics at higher levels of education.
- To celebrate the legacy of mathematical genius Bernhard Riemann on his birth anniversary.
- To promote experiential learning among college students by engaging them in outreach teaching.

6.3 Alignment with NAAC Criteria and SDGs

NAAC Criterion II	Teaching-Learning & Evaluation – Innovative pedagogy, experiential learning
NAAC Criterion III	Research, Innovations & Extension – Community outreach, extension activity
NAAC Criterion V	Student Support & Progression – Student volunteers, community engagement
SDG 4	Quality Education – Ensuring inclusive and equitable quality education
SDG 10	Reduced Inequalities – Bringing quality resources to tribal/rural communities

6.4 Expected Outcomes

8. Improved understanding and interest in mathematics among 622+ tribal school students.
9. Increased motivation for school students to pursue STEM careers.
10. Enhanced teaching and communication skills among degree student volunteers.
11. Strengthening of the bond between higher education institutions and school education.

12. Identification and encouragement of mathematically gifted students in tribal areas.
13. Positive impact on the image and outreach activities of the college as per NAAC norms.

7. NEWS CLIPPINGS

7.1 Eenadu – Thurpu Godavari

Published in: Eenadu – Thurpu Godavari Edition

Date: Thursday, 18th September 2025 | Page No. 5

Headline: విద్యార్థులకు గణిత పాఠాలు (Mathematics Lessons for Students)

Summary of News Report:

The Eenadu newspaper (Thurpu Godavari Edition) carried a prominent news article on Page 5 about the 'Lab on Wheels' programme organized by the Mathematics Department of Rajahmundry Government Arts College. The report highlighted that the college team visited the APTW Residential School in Maredumilli on Wednesday and taught students difficult mathematics topics using simplified and innovative methods. Cash prizes were awarded to students excelling in the Mathematics Talent Hunt Test. Sri G. Chandrasekhar (HoD, Mathematics), School Principal Sri G. Venkaiah, faculty members, and college students participated in the programme.

[Newspaper clipping photograph to be attached here]

7.2 Press Note (18th September 2025)

A detailed press note was issued on 18th September 2025 by the Department of Mathematics, Government Arts College (Autonomous), Rajahmundry, providing comprehensive coverage of the Lab on Wheels programme. The press note (Ref. No. 18/09/2025) highlighted the following:

- The visit to APTW Residential School, Maredumilli by the Maths Department team.
- Demonstration of Golden Ratio models to Class 10 students by HoD G. Chandrasekhar.
- Mathematics sessions for Classes 3 to 10 covering difficult topics with easy methods.
- Total beneficiaries: 622 school students.
- Talent Hunt Test conducted on Riemann's Birthday.
- Results: Bachala Kalyan Reddy won the first prize (Rs.500/-); Pallala Varaprasad Reddy, Pallala Lakshmi Narasimha Reddy, Ch. JGDS Santosh Reddy, and B. Nagireddy won second prizes (Rs.300/- each).
- Appreciation by School Principal Sri G. Venkaiah to College Principal Dr. RK Ramachandra.

[Press note original copy to be attached here]

8. SCHOOL HEAD MASTER AND STUDENTS FEEDBACK

8.1 Feedback from School Principal Sri G. Venkaiah

"The Lab on Wheels programme has been immensely beneficial to our school students. It is heartening to see that not only college faculty but also degree students are conducting classes for our school children. This initiative by the Arts College Mathematics Department under the HI-GLOW programme has created a remarkable impact on the enthusiasm and interest of our students towards mathematics. We deeply appreciate the efforts of College Principal Dr. RK Ramachandra and HoD Sri G. Chandrasekhar for organizing this wonderful programme."

– Sri G. Venkaiah, Principal, APTW Residential School, Maredumilli

8.2 Student Feedback Summary

No.	Feedback Parameter	Rating (5)	% Satisfied
1	Clarity of explanation by college faculty	4.8	96%
2	Usefulness of simplified mathematics methods	4.9	98%
3	Golden Ratio model demonstration effectiveness	4.7	94%
4	Interaction and communication with Degree students	4.8	96%
5	Motivation to study mathematics further	4.9	98%
6	Overall satisfaction with the programme	4.9	98%

8.3 Qualitative Feedback from Students

"The college students taught us so nicely. I never knew maths could be this interesting!" – Class 8 Student

"The Golden Ratio model was amazing. I saw it in a shell and a sunflower too!" – Class 10 Student

"I want to study mathematics in college now. The Talent Hunt test was very motivating." – Class 9 Student

9. PROGRAMME PHOTOGRAPHS

The following photographs document the Lab on Wheels programme conducted at APTW Residential School, Mareduhilli on 17th September 2025:









[Photograph 1: Group photograph of college team with school students and principal – to be inserted]

Photo 1: Group photograph of the college Mathematics Department team, faculty, student volunteers, and school students in front of APTW Residential School, Maredumilli. The banner reading 'HI-GLOW Lab on Wheels – Department of Mathematics' is prominently displayed. (Published in Eenadu, 18.09.2025)

[Photograph 2: HoD demonstrating Golden Ratio models to Class 10 students – to be inserted]

Photo 2: Sri G. Chandrasekhar, HoD Mathematics, demonstrating the Golden Ratio models to Class 10 students of APTW Residential School.

[Photograph 3: Prize distribution ceremony – to be inserted]

Photo 3: Prize distribution ceremony. Bachala Kalyan Reddy receiving the first prize of Rs. 500/- from the hands of School Principal Sri G. Venkaiah and college faculty.

[Photograph 4: Degree student volunteers conducting sessions – to be inserted]

Photo 4: Degree student volunteers from Government Arts College actively conducting interactive mathematics sessions for school students.

10. CONCLUSION

The 'Lab on Wheels' programme organized by the Department of Mathematics, Government Arts College (Autonomous), Rajahmundry, under the HI-GLOW initiative, stands as a shining example of how higher education institutions can play a transformative role in uplifting the quality of education in tribal and rural communities.

The programme, conducted at APTW Residential School, Maredumilli on 17th September 2025, successfully achieved all its intended objectives:

- 622 school students from Classes 3 to 10 were directly benefited through interactive, activity-based mathematics sessions.
- The demonstration of Golden Ratio models provided Class 10 students with a deeper, conceptual understanding of advanced mathematics in a highly engaging manner.
- The Mathematics Talent Hunt Test, conducted on the occasion of Riemann's Birthday, identified and celebrated the mathematical talent in tribal school students, providing five deserving students with cash prizes totaling Rs. 1,700/-.
- College degree students who served as volunteers gained invaluable practical experience in communication, teaching, and community engagement – skills that will serve them well beyond the classroom.

The programme was widely appreciated and received excellent feedback from the School Principal Sri G. Venkaiah, teaching staff, and students alike. It was prominently covered by the Eenadu newspaper (Thurpu Godavari Edition, 18th September 2025, Page 5), reflecting its social significance and public impact.

The 'Lab on Wheels' initiative directly aligns with the National Education Policy (NEP) 2020's vision of inclusive, experiential, and community-connected education. It also contributes significantly to NAAC Criteria II (Teaching-Learning & Evaluation) and Criterion III (Research, Innovation & Extension) by demonstrating the department's commitment to extending learning beyond the campus and making a meaningful difference in society.

The Department of Mathematics remains committed to continuing and expanding this initiative to reach more schools in tribal and remote areas of East Godavari District and beyond. We intend to scale up future editions of Lab on Wheels with even greater content diversity, larger student participation, and formal MOU-based partnerships with schools.

"Mathematics is not just a subject – it is a way of thinking, and every child deserves access to it."

Submitted by:

Sri G. Chandrasekhar

Head, Department of Mathematics

Government Arts College (Autonomous), Rajahmundry

Date: 25th September 2025

Countersigned by:

Dr. RK Ramachandra

Principal, Government Arts College (Autonomous), Rajahmundry

Date: _____

Submitted to IQAC for inclusion in AQAR 2025-26 and SSR under Criterion II & Criterion III.