

Report on the Seven-Day Workshop on Vedic Mathematics

Organized by: Mathematics Department, Government College, Karsog

Dates: 2nd – 7th December 2024

Resource Person: Mr. Dharmender Sharma

Participants: Physical Sciences Students

Introduction

The Mathematics Department of Government College Karsog organized a seven-day workshop from 2nd to 7th December 2024. The workshop, led by Mr. Dharmender Sharma, aimed to introduce the **16 Sutras of Vedic Mathematics** and their applications in simplifying mathematical calculations. The event commenced with a welcome speech and opening remarks by Mrs. Ruchi Narang, Head of the Mathematics Department.

Workshop Highlights

Day 1: 2nd December 2024

- Mr. Sharma introduced the history and significance of Vedic Mathematics.
- **"Ekadhikena Purvena" (By one more than the previous one):** Explained for calculating squares of numbers ending in 5.
- **"Nikhilam Navatashcaramam Dashatah" (All from 9 and the last from 10):** Demonstrated for quick subtraction and multiplication of numbers near powers of 10.

Day 2: 3rd December 2024

- **"Urdhva-Tiryakbhyam" (Vertically and Crosswise):** Taught for rapid multiplication techniques.
- **"Paravartya Yojayet" (Transpose and Apply):** Discussed for solving simultaneous linear equations easily.

Day 3: 4th December 2024

- **"Shunyam Saamyasamuccaye" (When the sum is the same, it is zero):** Applied to simplify algebraic expressions.
- **"Anurupye Shunyamanyat" (If one is in ratio, the other is zero):** Introduced for solving ratio-based equations.

Day 4: 5th December 2024

- **"Sankalana-Vyavakalanabhyam" (By addition and by subtraction):** Explained for solving complex equations.

- **"Puranapuranabyham" (By the completion or non-completion):** Demonstrated to simplify fractional calculations.

Day 5: 6th December 2024

- **"Chalana-Kalanabyham" (Differences and Similarities):** Discussed to solve calculus-related problems.
- **"Yaavadunam" (Whatever the extent of its deficiency):** Demonstrated for squaring numbers below base values like 10 or 100.

Day 6: 7th December 2024 (Morning)

- **"Vyashtisamanstih" (Part and Whole):** Explained for quick addition and subtraction of large numbers.
- **"Shesanyankena Charamena" (The remainders by the last digit):** Taught for simplifying division problems.

Day 7: 7th December 2024 (Afternoon)

- Remaining sutras such as **"Sopaantyadvayamantyaam" (The ultimate and twice the penultimate)** and **"Ekanyunena Purvena" (By one less than the previous one)** were discussed briefly.
- An interactive session was held to address students' queries and applications of sutras in competitive exams.
- The workshop concluded with a feedback session by Mrs. Ruchi Narang, who commended the efforts of the resource person and participants.

Conclusion

The seven-day workshop successfully introduced participants to the practical applications of Vedic Mathematics. The resource person, Mr. Dharmender Sharma, provided engaging and insightful explanations, making mathematical concepts accessible and exciting. The Mathematics Department's initiative was highly appreciated by all.



