

From the Editor's Desk . . .

With the November issue comes a sense of closure- the year which started with the usual hopes and expectations has played itself out in reality and while the highs may not have been as high as we dreamed, the lows were definitely not as low as we feared! At Right Angles has had a long run in its present avatar and as the world grows 'softer', we are moving more and more online. You, our readers, would have noticed that we have been featuring many of our articles only in the online version and 2024 will continue and sharpen this trend. Let me explain.

Azim Premji Foundation works to improve the school education system in India, with a focus on the more disadvantaged areas of the country. In order to be a good-quality learning resource for practicing teachers, teacher educators and educational functionaries of school education, the articles in the print edition will be focused on helping to build teacher capacity. They will be directed towards facilitating more experiential and meaningful teaching-learning processes inside classrooms and to support the engagement of the school with the communities that they serve. While we have carried several articles which work to this end in past issues, the print version (which will also be available online) will now focus on such articles with emphasis on laying a solid foundation in mathematics- which means more mathematics pedagogy articles at the primary and upper primary level.

At the same time, we have always encouraged explorations and problem solving in mathematics and have built up an active community of readers and contributors. This momentum should continue, particularly the encouraging trend of more articles coming in from student contributors - and we are exploring ways in which this can happen.

And here are the highlights of the November 2023 issue! We feature the second part of Shailesh Shirali's article *Two New Proofs of the Pythagorean Theorem* – the charm is in the journey as you will see. We have three authors contributing articles on patterns in numbers: Meera Bhide harnesses these to *Compute Squares of Consecutive Numbers*, Sujatha Singha visualizes the *Sums of Powers of Any Composite Number* and Hara Gopal defines *Haras Numbers*.

Recreation and Mathematics- an unlikely pair for most people, excluding the readers of At Right Angles - and in the November issue Shyam Sunder Gupta makes *Amazing Shapes using Factorial Digits*, Sreya Mukherjee designs an *Integer Board Game* and Vanshika Mittal describes her adventures with *Nesting Platonic Solids*.

Finding connections- here are three articles which do that! Akash Maurya finds *Connections between Paper Folding, Geometry and Proof*, Jyoti Nema & Poonam Aggarwal find a *Link between Three Trigonometric Identities for a Triangle* and Komal Asrani studies *Radius (Trijya) and Sine (Jya) - the Names and their Relationship*. The pedagogical aspects of teaching number names and numerals are addressed by Math Space in *How Much or Till What: When and Why?* A S Rajagopalan describes yet another advantage of problem solving – unlooked for bonus discoveries in *Two Fruits on One Stalk*.

Problem Corner and Student Corner have plenty of nail biting suspense- featuring *Nine-Point Centres*, *Zeller's Congruence* and the *Doomsday Algorithm* and more. Anushka Tonapi describes *Explorations on the Sierpinski Gasket Graph* in TechSpace and Divakaran D reviews *Adventures of a Mathematician by Stanislaw Ulam*.

And we close with the PullOut- the teaser is on the cover of the November issue..... Padmapiya Shirali welcomes *Newspapers in the Mathematics Class* and how!

Read on to find out!

Sneha Titus

Associate Editor