

Modern Mathematics Inspired by Vedic Mathematics: A Synthesis of Tradition and Contemporary Computational Thought

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Abstract: *Vedic Mathematics, a system attributed to ancient Indian scholarly traditions and later reconstructed by Bharati Krishna Tirthaji in the early 20th century, presents a collection of mental calculation techniques rooted in sixteen sutras (aphorisms). While often debated in terms of historical authenticity, its computational efficiency and pedagogical elegance have inspired renewed interest in modern mathematical research and education. This paper explores the integration of Vedic mathematical principles into contemporary mathematical frameworks, focusing on algorithm design, computational efficiency, and educational methodologies. By analyzing selected sutras and mapping them onto modern algebraic structures, numerical methods, and computational paradigms, this study demonstrates how Vedic techniques can inform innovative problem-solving strategies. The findings suggest that Vedic Mathematics, when rigorously interpreted, offers valuable insights into algorithmic thinking and cognitive mathematics, contributing to both theoretical and applied domains.*

Keywords: *Vedic Mathematics*