

### Review Form 3

Journal Name:	<a href="#">Journal of Advances in Mathematics and Computer Science</a>
Manuscript Number:	Ms_JAMCS_128057
Title of the Manuscript:	Fundamental Properties of Generalized n-th Roots of Real Numbers
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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#### **PART 1: Comments**

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)		
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.		
Is the manuscript scientifically, correct? Please write here.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		
Is the language/English quality of the article suitable for scholarly communications?		
<b><u>Optional/General</u></b> comments	<p>The article outlines a rigorous exploration of the properties of -th roots of real numbers, offering generalized insights for various number domains. Below are comments on the content, structure, and presentation:</p> <p>Strengths:</p> <ol style="list-style-type: none"> <li>1. Comprehensive Scope: The paper effectively covers multiple domains (), addressing both rational and irrational roots. The progression from specific to general cases is logical and well-structured.</li> <li>2. Simplified Question Reduction: The reduction of the general question () to the simpler form () is well-explained. This step facilitates understanding and reduces complexity.</li> <li>3. Proof Clarity: The proofs, especially for irrational roots () and negative real numbers, are concise yet mathematically sound.</li> </ol>	

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	<p>4. Application-Oriented: Section 6 demonstrates practical applications of the results, making the theoretical findings accessible for solving real-world mathematical problems.</p> <p>5. References and Historical Context: The inclusion of references to Euclid’s work and subsequent generalizations situates the paper in a broader mathematical tradition.</p> <p>---</p> <p>Areas for Improvement:</p> <p>1. Clarity in Notation: Some notation is used without proper introduction. Not all readers may intuitively understand that . In Case C1 of Section 3, z appears abruptly. Consider defining such terms explicitly upon first use.</p> <p>2. Handling of Negative Real Numbers (Section 3): The treatment of square root of x for <math>x &lt; 0</math> lacks uniformity. While the paper acknowledges differing conventions for odd and even roots, it does not state which convention the authors adopt. Clarifying this would prevent confusion.</p> <p>3. Terminology: The use of “astonishingly simple” to describe results or solutions may appear subjective. Consider rephrasing to “straightforward” or “elegant.” Terms like “challenging” and “non-trivial” are used repeatedly. While these emphasize the significance of the problems, they may be replaced with more precise descriptions of the mathematical difficulty.</p> <p>4. Examples in Section 6: While the examples are useful, the solutions rely heavily on prime factorizations without elaborating on computational feasibility for very large numbers. Including remarks on practical computation (e.g., algorithms) would strengthen this section.</p> <p>5. Conclusion and Impact: The conclusion is somewhat generic. Adding specific potential applications of the results (e.g., in cryptography, algebraic number theory) would increase the impact.</p> <p>6. Formatting and Minor Edits: Some mathematical expressions appear cluttered (e.g., ). Spacing or LaTeX-style typesetting would improve readability. Typographical errors such as “Gove” instead of “Give” (in your request) or “( n ( N(2” instead of “” should be corrected.</p> <p>---</p> <p>Conclusion: The paper is a significant contribution to number theory, offering new insights into the rationality of -th roots for real numbers. Addressing the above areas would enhance its clarity, accessibility, and practical relevance.</p> <p><b>Decision: Revise and Resubmit</b></p>	
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**PART 2:**

	Reviewer’s comment	Author’s comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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