

Review of: "New Computational Methods Using Seventh Derivative Type for the Solution of First Order Initial Value Problems"

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Potential competing interests: No potential competing interests to declare.

The work on Newton-Raphson's method demonstrates a diligent effort, and the workflow is reasonably clear. However, I have reservations about recommending the publication of the paper for the following reasons:

Literature Review: The introduction lacks a comprehensive literature review. While the authors mention differing definitions within the research area, they fail to elaborate on these definitions or provide context. Additionally, instead of simply citing reference numbers, it would enhance the clarity to include the names of the authors of the literature being referenced.

Clarity of Writing: Several passages suffer from unclear or awkward expressions, detracting from the readability of the paper. For instance:

"It is noteworthy that [1], first examined the optimal approach using numerical methods to solve stiff ODEs." This sentence could be rephrased for clarity, such as "Reference [1] initially explored the optimal numerical methods for solving stiff ODEs."

"However, some of the prominent numerical methods include the Euler method [3], linear multistep methods [4], and Runge-Kutta methods [5]." This sentence could be clarified by explicitly stating what it intends to convey, such as "However, among the prominent numerical methods are the Euler method (cited in [3]), linear multistep methods (discussed in [4]), and Runge-Kutta methods (referenced in [5])."

"Hence, the necessity to develop more effective approximation methods." This sentence lacks a subject and verb, making it incomplete. It could be revised as "Hence, there is a need to develop more effective approximation methods."

Besides all above, numerous grammar or typos are not listed here and authors should check and revise carefully.

Data Presentation: The paper contains numerous tables of data, which can become overwhelming. It would be advisable to relocate some of these tables to the Appendix section to streamline the main text. Additionally, the figures lack clear explanations. For instance, when stating, "The results are presented in Table 3 with their efficiency curves shown in Figures 6 and 7," it's unclear what the curves represent and how they relate to the findings. Providing detailed explanations of the figures, including axis labels and interpretations of curve shapes, would enhance understanding.

Abbreviations: The authors should fully explain abbreviations such as "7D2PIB1" upon their first mention in the paper to



avoid confusion.