Review Form 3

Journal Name:	**Asian Research Journal of Mathematics**
Manuscript Number:	**Ms_ARJOM_124419**
Title of the Manuscript:	**A Six-Point y-Function Hybrid Block Method for Direct Solution of Third Order Ordinary Differential Equations**
Type of the Article	

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PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	**Dear Editor,** **This paper presents a novel six-point y-function hybrid block method for solving third-** **order ordinary differential equations (ODEs) directly, which is timely and relevant, especially** **for fields where third-order ODEs are frequently used. The mathematical formulation,** **especially the interpolation and collocation approach, is clearly outlined. Equations (2)-(7)** **are derived systematically, showing the rigorous foundation for the method. The authors** **validate their method through multiple numerical experiments, comparing it with existing** **methods and demonstrating superior performance in terms of error minimization. This paper** **thoroughly discusses the method's stability, consistency, and convergence properties,** **providing confidence in its robustness. In addition to the above advantages, there are some** **points that must be taken into account to strengthen the paper. I hope that you, dear ones, will** **have a share in accepting this effort:** **1. While the paper cites relevant prior work, the literature review could benefit from a** **more in-depth comparison with recent advancements in the field. A clearer identification of the gaps in existing methods that this study aims to fill would** **enhance its contribution.** **2. The derivation of the continuous scheme in Equation (7) introduces various** **coefficients (e.g., α and β). While their roles are discussed, a more detailed explanation or intuitive understanding of how these coefficients affect the method's** **behaviour would be beneficial for the reader.** **3. The paper compares the new method's results with other existing methods. However,** **more complex test problems with varying step sizes could demonstrate the method's** **flexibility and accuracy in real-world applications. Additionally, a broader discussion** **of the computational efficiency (e.g., runtime comparisons) could strengthen the** **results.** **4. Some figures, such as the stability region plot (Figure 1), could be made clearer by** **improving resolution and labelling. It would be helpful if the figures explicitly** **mentioned the scale of axes and significance of the regions depicted.** **5. While the paper claims that the method is of order 8, more details on how this** **conclusion was drawn could be included. A comparison of the derived**	

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	order with similar methods would provide additional context for the reader. 6. The authors could explore extending the method to higher-order ODEs or consider adaptive step size implementations to improve computational efficiency. 7. The manuscript exhibits a plagiarism rate of 27%, which raises significant concerns about originality and ethical standards. I strongly recommend the authors conduct a thorough review to address these issues by properly citing sources and rephrasing content where necessary. I encourage the use of plagiarism detection tools in future submissions to ensure compliance with publication standards.	
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.		
Are subsections and structure of the manuscript appropriate?		
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**		
Optional/General comments		

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?	*(If yes, Kindly please write down the ethical issues here in details)*	

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