

Review Form 1.6

Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_81687
Title of the Manuscript:	A Comparison of Implicit and Modified Implicit Finite Difference Schemes for Solving Parabolic Equations
Type of the Article	

General guideline for Peer Review process:

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 guideline for Peer Review process, reviewers are requested to visit this link:

<https://www.journalarjom.com/index.php/ARJOM/editorial-policy>)

PART 1: Review Comments

	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)
Compulsory REVISION comments	<p>1, The modified implicit FDM is exactly the same as the classical Implicit FDM, and this is the biggest problem. The FDM for parabolic PDEs is a time-stepping scheme, which will produce a series of algebraic equations, i.e. the matrix form in the paper. If the authors write down the equation sequence of the modified implicit FDM (3) and these of the classical Implicit FDM (4), they will find that the two sequences are identical. In fact, this point can also be found in numerical examples, every two adjacent tables are exactly the same. Therefore, the authors should find some new modified methods, which is better than the existing numerical schemes.</p> <p>2, The two numerical examples belong to the same type. Example 2 should be more complicated, such as heat equation with variable coefficients, with Robin boundary conditions, with some force terms, with advection terms and reaction terms, or even for nonlinear heat equations.</p>	
Minor REVISION comments	<p>There are many small mistakes, we can list some of them.</p> <p>1, in section 2, the model should be given first, and there is not any notation for the first formula, and the readers will be confused</p> <p>2, for the first two equations in formula (1), they use the same symbol, but have different expressions?</p> <p>3, in subsection 2.2, for the matrix form $Af=a$, what is the expression of the symbol 'a'?</p> <p>4, the word 'von-Newmann' is misspelled.</p> <p>5,...</p>	
Optional/General comments		

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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>	

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