

Review Form 3

Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_122173
Title of the Manuscript:	Total Offensive Alliances on Some Graphs
Type of the Article	Original Research Article

Review Form 3

PART 1: Review Comments

Compulsory REVISION 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>
<p>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.</p>		
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>		
<p>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.</p>	<p>This paper investigates the properties of Total Offensive Alliances (TOAs) in specific types of graphs, particularly focusing on connected graphs with a maximum degree of 2, path graphs P_n cycle graphs C_n complete graphs K_n and star graphs $K_{1,n}$. The primary result presented is a characterization of TOAs in these graph structures, stating that a subset T of vertices in a graph G forms a TOA if and only if no two vertices in the boundary of T are adjacent, and the induced subgraph $G[T]$ contains no isolated vertices.</p> <p>The proof for this characterization is structured clearly, demonstrating that the absence of adjacent vertices in the boundary and the lack of isolated vertices are both necessary and sufficient conditions for T to be a TOA. Furthermore, the paper extends this result to specific classes of graphs, providing exact values or bounds for the minimum size of a TOA in these cases.</p> <p>The corollaries and specific cases for path and cycle graphs are particularly insightful, as they offer a detailed analysis of how the modulus of n (the order of the graph) affects the minimum size of a TOA. The paper successfully establishes a clear connection between graph structure and the properties of TOAs, making it a valuable contribution to the study of alliances in graph theory. The theoretical results are well-supported by rigorous proofs, making this a solid foundation for further research in this area.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>		
<p>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.</p>		
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>		

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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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