

Peer Review

Review of: "Patterns of Squares Around an Arbitrary Triangle"

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The paper proposes a new pattern of squares around an arbitrary triangle based on four squares instead of three squares as done in the literature. This construction leads to some known and unknown number sequences.

Major comments:

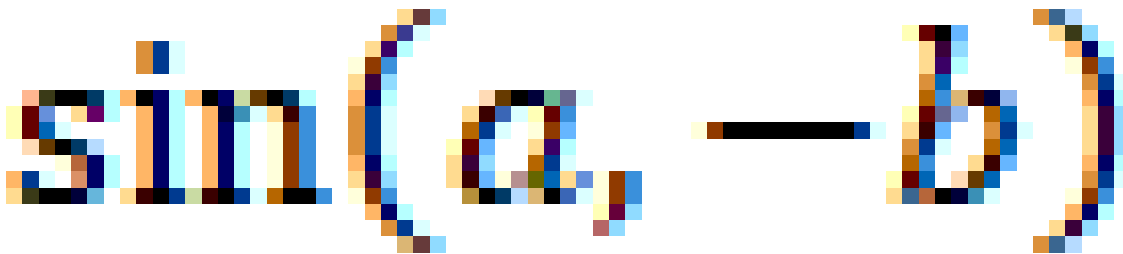
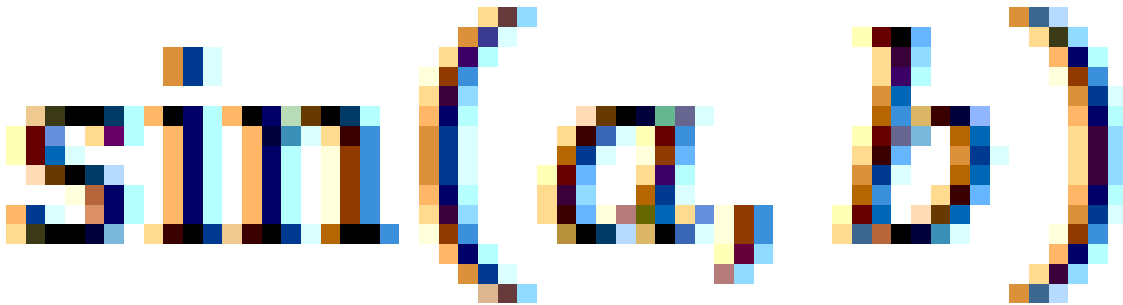
1. The authors adopted the clockwise rotation, which is uncommon in mathematics. I recommend using the trigonometric sense naturally. I recall, to this end, that the electrons, the stars, and the blood in the human body rotate all in the trigonometric sense and not in the clockwise sense.
2. Figure 3, illustrating the technique of four hinged squares, is based on a triangle whose all angles are acute. What happens if the original "arbitrary" triangle has an obtuse angle?
3. The iterative process of constructing the squares of side a , b , and c is possible only if the squares do not overlap. For instance, if the square of side a intersects the square of side b , determining separately the area of these squares does not make sense. The authors must prove that "overlapping" is not possible or find a sufficient condition on the original "arbitrary" triangle that avoids the overlapping.

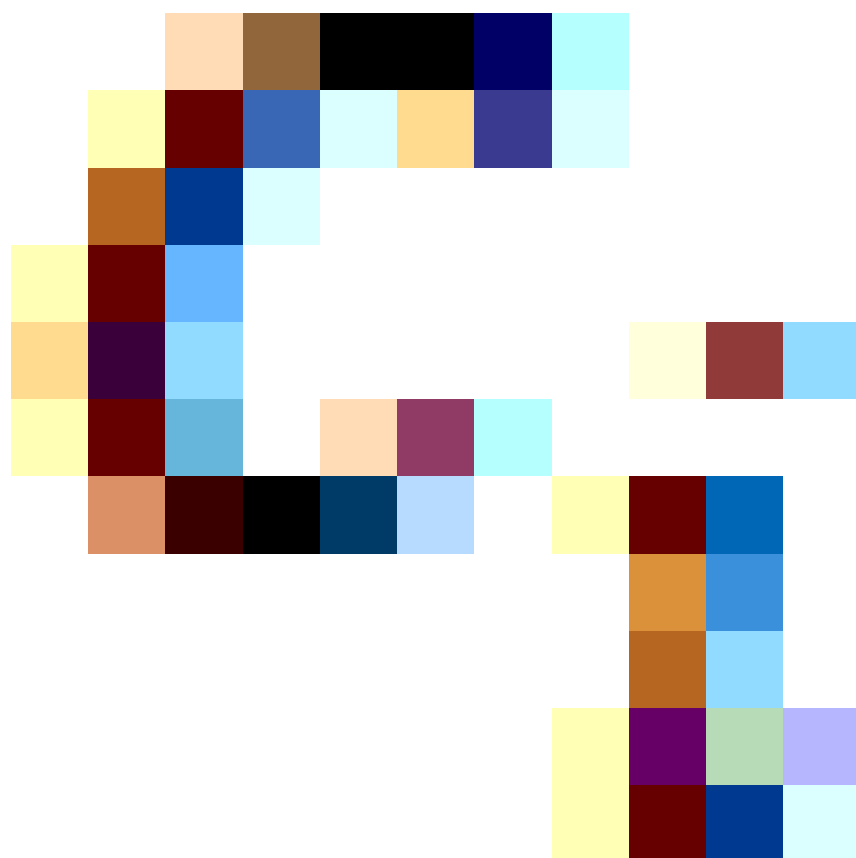
Minor comments:

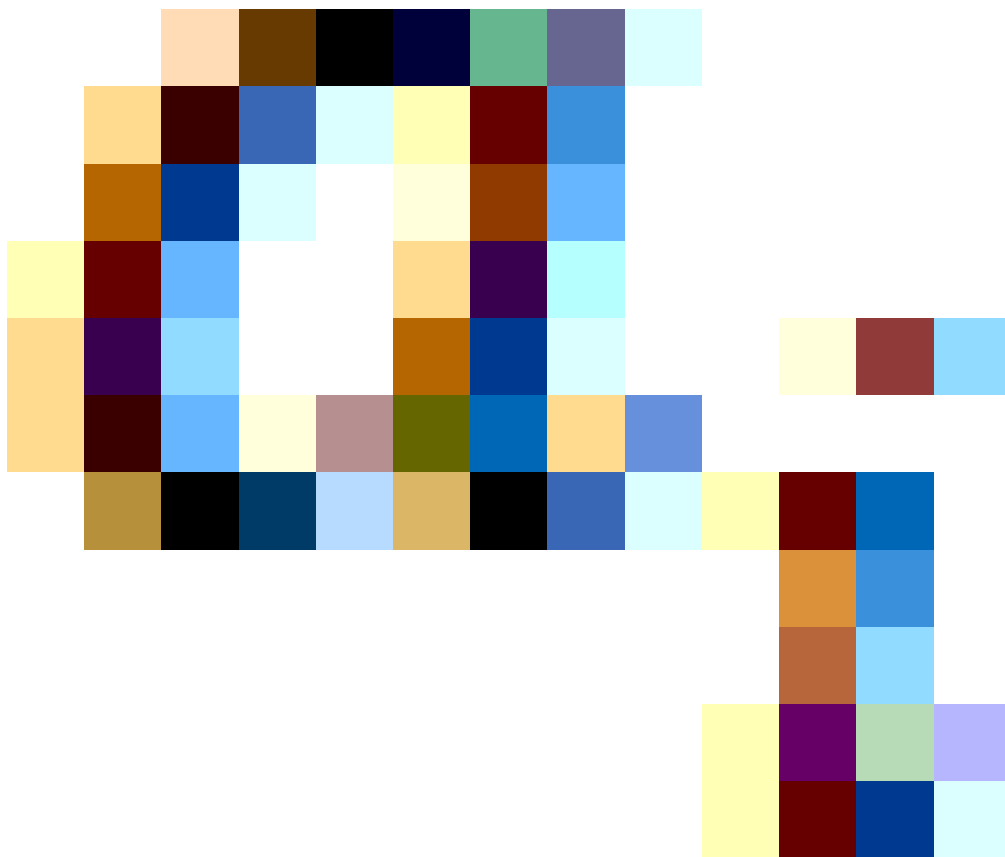
1. Number the relevant equations/results and refer to them in order to make the reading of the preprint easier.
2. Page 6, line 5: check if it is a or b .
3. Page 6: the last identity should be briefly justified.
4. State the most important results as theorems. I suggest expressing the result on page 8 and the result on page 9 as theorems.

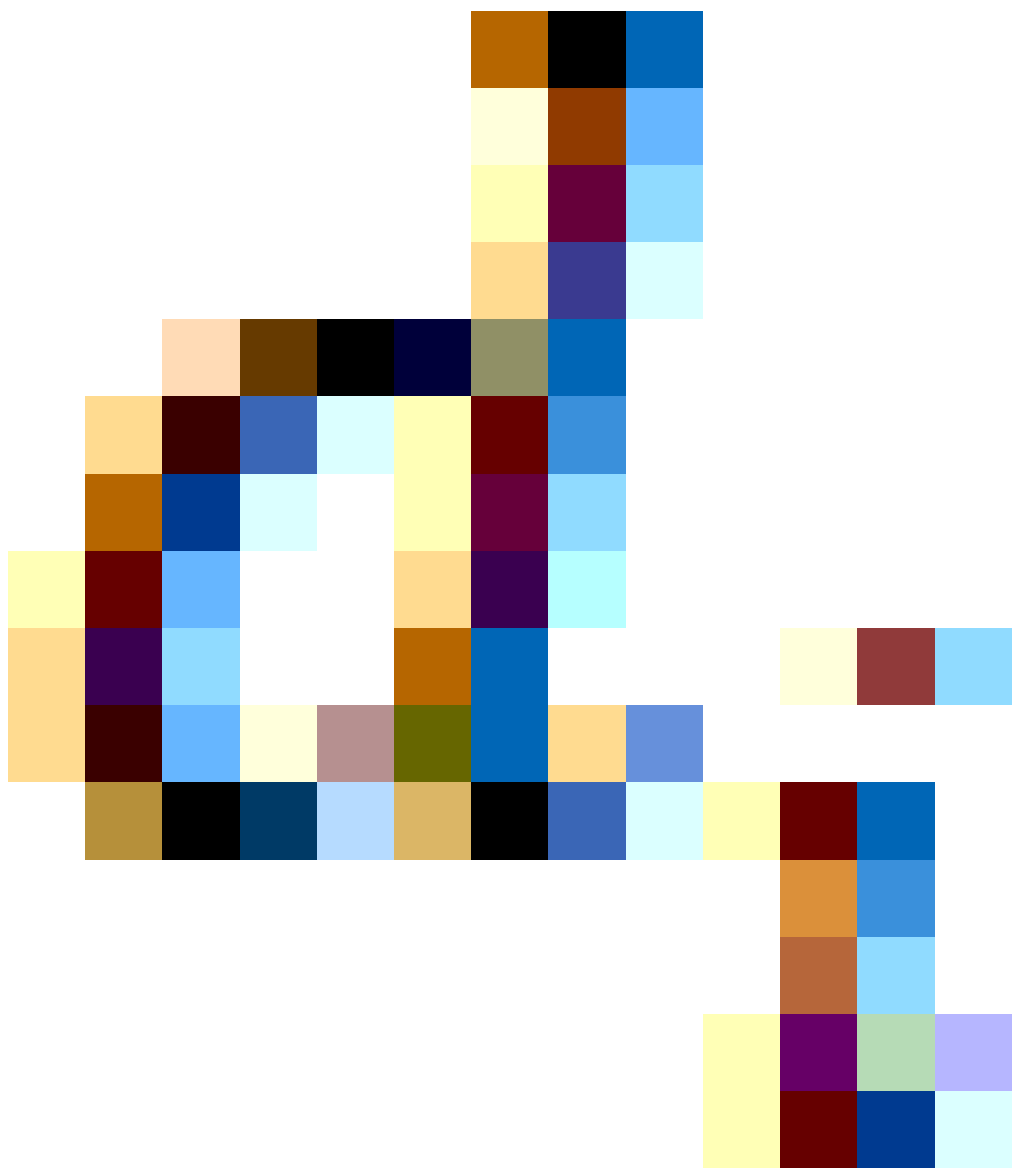
Conclusion:

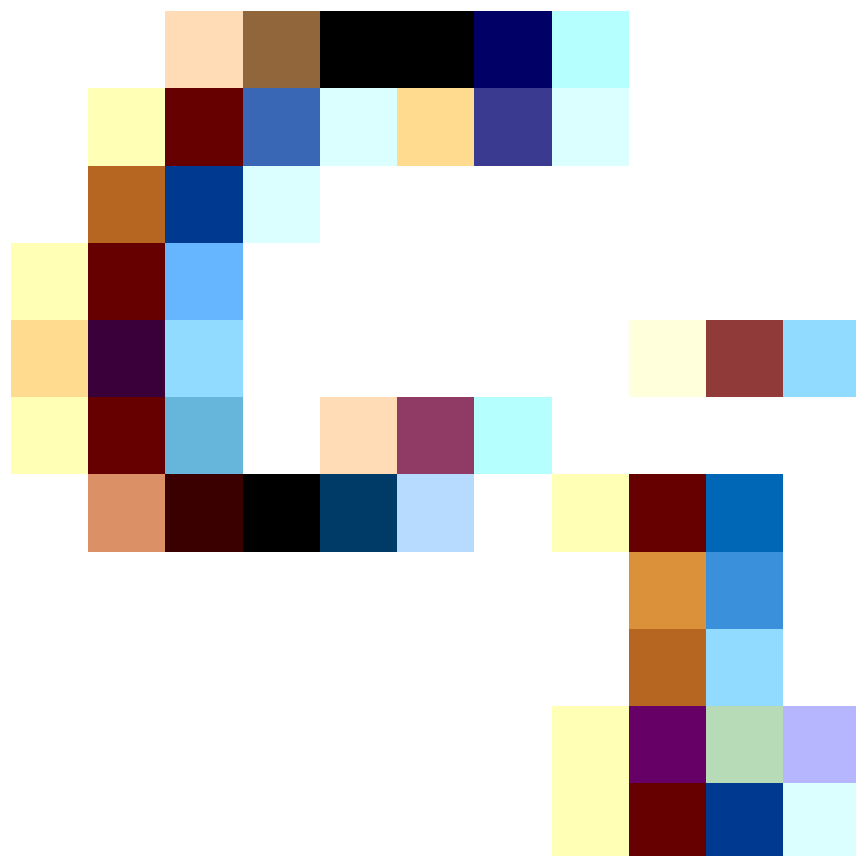
In my opinion, the preprint can be accepted only if item 3 of the major comment is clearly justified; otherwise, the preprint is rejected.

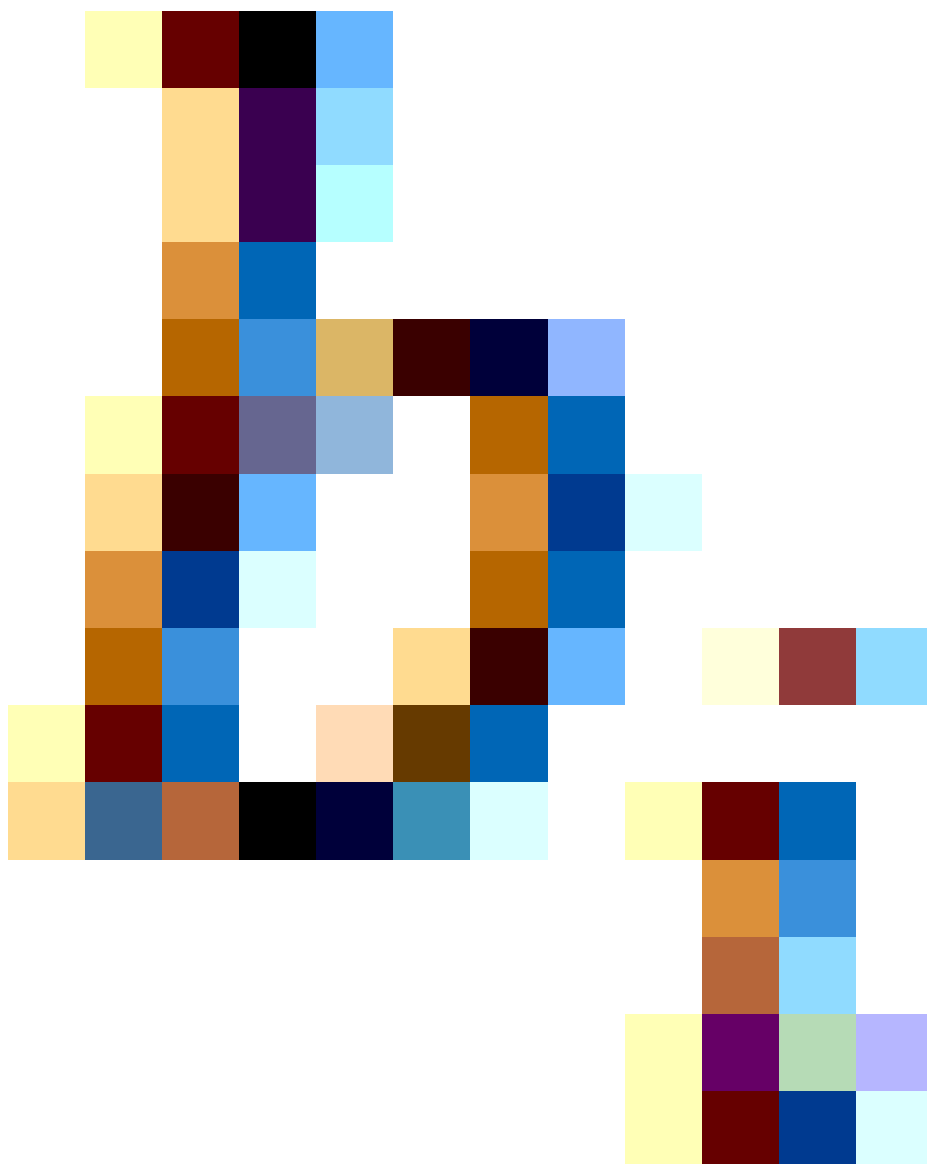


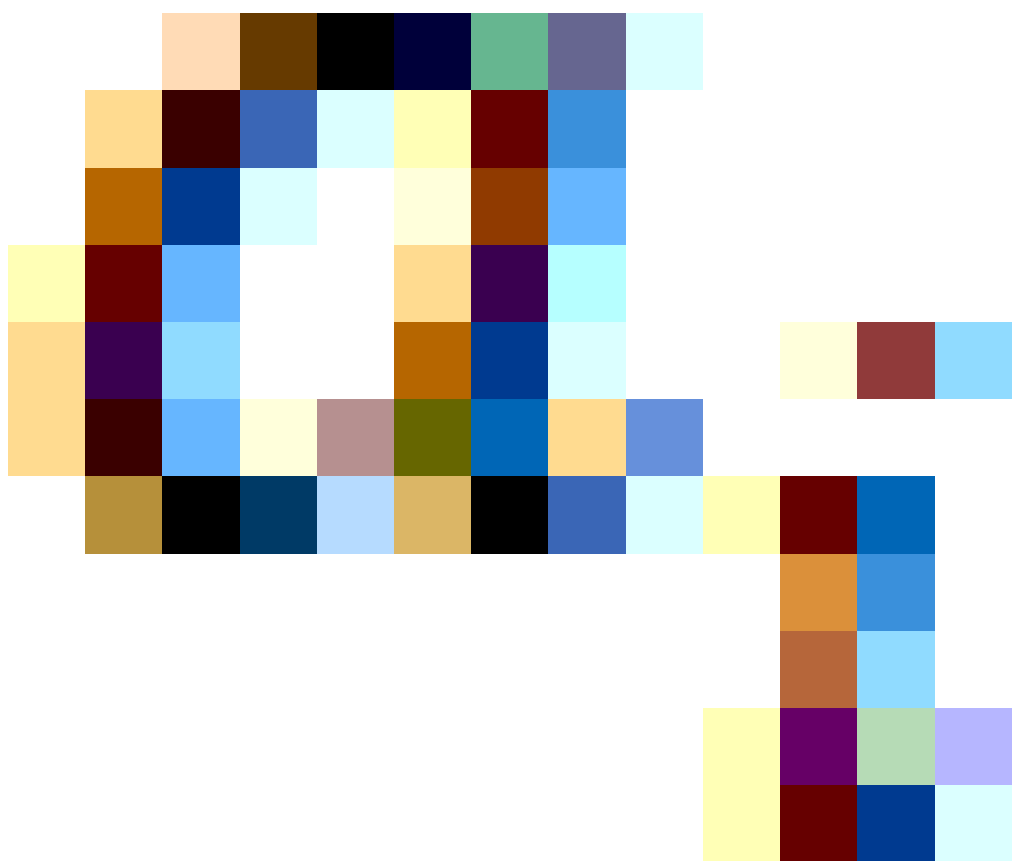












Attachments: available at <https://doi.org/10.32388/JL8OJG>

Declarations

Potential competing interests: No potential competing interests to declare.