

Peer Review

Review of: "Visualizing Generalizations of the Pythagorean Theorem"

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The Ebisui-Notrott theorem and the Four Hinged Squares theorem are both generalizations of the Pythagorean theorem. The Ebisui-Notrott theorem specifically addresses a configuration involving the construction of squares on the convex hull of the original squares. It states that the sum of the areas of two of these new squares, which are positioned along the legs of a right triangle, is equal to five times the area of the third square located across the hypotenuse. Continuing this construction leads to a new Pythagorean configuration.

Although these results have been documented in previous literature, their proofs typically relied on trigonometry, vectors, and complex numbers. In contrast, the proofs presented here use the method of rearranging areas, along with Euclid's windmill proof of the Pythagorean theorem, and are accompanied by clear and helpful diagrams such as Figures 3 and 4. These visual proofs are self-explanatory, concise, and easy to understand. They highlight the importance of fundamental facts about quadrilaterals and triangles in a manner suitable for presentation in school textbooks.

Declarations

Potential competing interests: No potential competing interests to declare.