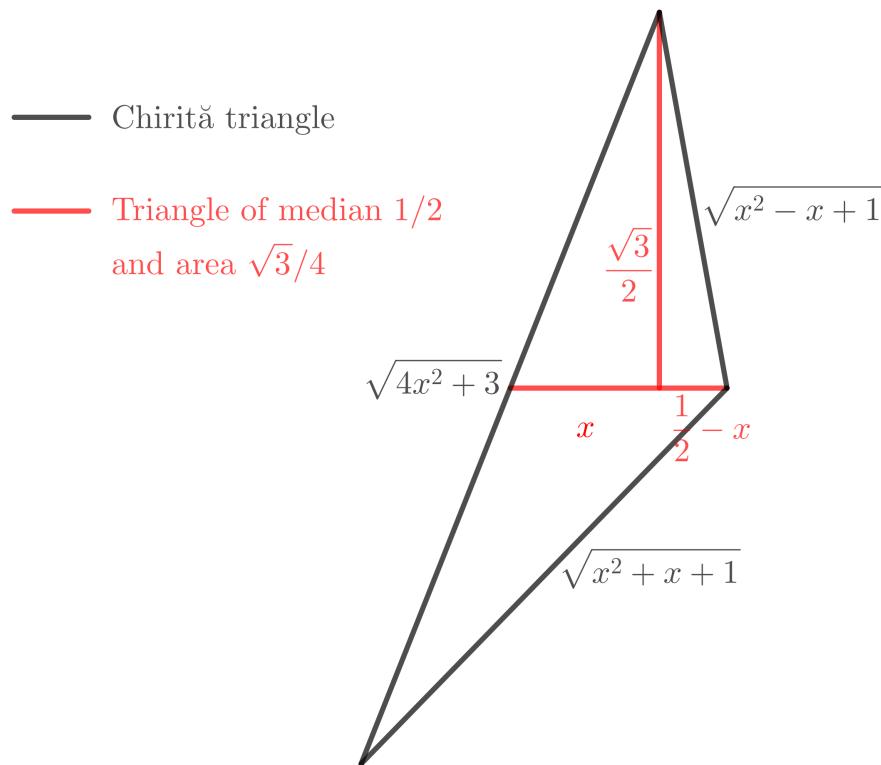March 21st 2022

Proof without words:
the Chiriță-Sitaru-Nănuți theorem and its converse

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Theorem. The Chiriță triangles (triangles of sides $\sqrt{4x^2 + 3}$, $\sqrt{x^2 - x + 1}$, $\sqrt{x^2 + x + 1}$) are exactly the triangles of median $1/2$ and area $\sqrt{3}/4$.

The left-right implication is equivalent to propositions 2 and 3 of
D. Sitaru, C. Nănuți. Metric relationships in Chiriță's triangle. Romanian Mathematical Magazine, November 2019.