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Eva G Goedhart* (goedhart@lvc.edu), 101 N. College Ave, Annville, PA 17003, and **Helen G Grundman**. *Solving the Diophantine Equation* $(a^2cX^k - 1)(b^2cY^k - 1) = (abcZ^k - 1)^2$.

Given positive integers a, b, c, k with $k \geq 7$, the equation $(a^2cX^k - 1)(b^2cY^k - 1) = (abcZ^k - 1)^2$ has no integer solutions $x, y, z > 1$ with $a^2x^k \neq b^2y^k$. I will present the proof of this result using results on continued fractions and a Diophantine approximation theorem due to M.A. Bennett. (Received September 24, 2017)