

1106-11-1767

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(grundman@brynmawr.edu). *On Solving the Equation $(a^2x^k - 1)(b^2y^k - 1) = (abz^k - 1)^2$.*

I will discuss our proof that the equation $(a^2x^k - 1)(b^2y^k - 1) = (abz^k - 1)^2$ has no positive integer solutions with $k \geq 7$ and $a^2x^k \neq b^2y^k$, extending the results of Bennett and of Zhang. Of key interest will be the use of Diophantine approximation and of computer calculations done by my coauthor as part of her dissertation research. (Received September 15, 2014)