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Robert Styer* (robert.styer@villanova.edu), Dept of Mathematics and Statistics, 800 Lancaster Ave, Villanova, PA 19085, and **Reese Scott**. *Number of solutions to $a^x + b^y = c^z$.*

We show the following: For relatively prime integers a and b both greater than one and odd integer c , there are at most two solutions in positive integers (x, y, z) to the equation $a^x + b^y = c^z$. There are an infinite number of (a, b, c) giving exactly two solutions. Lastly, we outline some extensions. (Received September 16, 2016)