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**Lenny Jones\*** (lkjone@ship.edu), Department of Mathematics, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257. *Generalizing a Theorem of Sierpiński Using Lucas Sequences*. Preliminary report.

In 1960, Sierpiński proved that there exist infinitely many odd positive integers  $k$  such that  $k \cdot 2^n + 1$  is composite for all positive integers  $n$ . In this talk, we investigate generalizations of this result with  $2^n$  replaced by expressions involving certain Lucas sequences. (Received September 18, 2009)