1096-11-375 **Soohyun Park*** (soopark@mit.edu), 3 Ames St., Cambridge, MA 02139. *Arithmetic properties of generalized Fibonacci sequences.*

The *generalized* Fibonacci sequences are sequences $\{f_n\}$ which satisfy the recurrence $f_n(s,t) = sf_{n-1}(s,t) + tf_{n-2}(s,t)$ $(s,t \in \mathbb{Z})$ with initial conditions $f_0(s,t) = 0$ and $f_1(s,t) = 1$. In a recent paper, Amdeberhan, Chen, Moll, and Sagan considered some arithmetic properties of the generalized Fibonacci sequence. Specifically, they considered the behavior of an analogue of the p-adic valuation. In this paper, we resolve a conjecture which they raised relating to this topic. We also consider the rank modulo n in more depth and find an interpretation of the rank in terms of the order of an element in the multiplicative group of a finite field when n is an odd prime. Finally, we study the distribution of the rank over different values of s when $t = -1$ and suggest directions for further study involving the rank modulo prime powers of generalized Fibonacci sequences. (Received August 30, 2013)