1096-VR-2125 **Marc S. Renault*** (msrenault@ship.edu), 1871 Old Main Drive, Shippensburg, PA 17257.
Properties of the (a, b)*-Fibonacci Sequence, Modulo* m*.*

For integers a and b, we consider the (a, b)-Fibonacci sequence F defined by $F_0 = 0$, $F_1 = 1$, and $F_n = aF_{n-1} + bF_{n-2}$. $F \pmod{m}$ is periodic with period denoted $\pi(m)$. The rank of $F \pmod{m}$, denoted $\alpha(m)$, is the least positive r such that $F_r \equiv 0 \pmod{m}$, and the order of $F \pmod{m}$, denoted $\omega(m)$, is $\pi(m)/\alpha(m)$. We pull together results on $\pi(m)$, $\alpha(m)$, and $\omega(m)$ from the classic case $a = 1$, $b = 1$, and generalize them to accommodate arbitrary integers a and b. Matrix methods are used to provide elementary proofs. (Received September 17, 2013)