1035-20-150 **Tyler Lemburg*** (trlemburg@gmail.com), 630 N. 14th St, Lincoln, NE 68508, and **Christina Zlogar**, **Andrew Niles**, **Nathan Kaplan** and **Scott Chapman**. *Shifts of Generators and Delta Sets of Numerical Monoids.*

Let S be a numerical monoid (i.e., an additive submonoid of $\mathbb{N}_0$) with minimal generating set $\langle n_1, \ldots, n_t \rangle$. For $m \in S$, if $m = \sum_{i=1}^{t} x_i n_i$, then $\sum_{i=1}^{t} x_i$ is called a *factorization length* of m. We denote by $\mathcal{L}(m) = \{m_1, \ldots, m_k\}$ (where $m_i < m_{i+1}$ for each $1 \leq i < k$) the set of all possible factorization lengths of m. The delta set of m is defined by $\Delta(m) = \{m_{i+1} - m_i \mid 1 \leq i < k\}$ and the delta set of S by $\Delta(S) = \bigcup_{m \in S} \Delta(m)$. Let $r_1, \ldots, r_t$ be an increasing sequence of positive integers and $M_n = \langle n, n + r_1, \ldots, n + r_t \rangle$ a numerical monoid where n is some positive integer. We prove that there exists a positive integer N such that if $n > N$ then $|\Delta(M_n)| = 1$. If M_n has 3 generators, and r_1 and r_2 are relatively prime, then we determine a value for N which is sharp. (Received July 31, 2007)