1039-11-108 **Melvyn B. Nathanson*** (melvyn.nathanson@lehman.cuny.edu), Department of Mathematics, Lehman College (CUNY), Bronx, NY 10468. *Linear forms of finite sets of integers and lattice points.*

Let A be a subset of an abelian semigroup S, written additively. For any positive integer u, denote the dilation $u * A = \{ua : a \in A\}$. If A and B are subsets of S, the sumset A+B is the set $\{a + b : a \in A, b \in B\}$. Let $L(x_1, \ldots, x_h) = u_1x_1 + \cdots + u_hx_h$ be a linear form with positive integer coefficients. For any sets $A_1, \ldots, A_h$, define the generalized sumset $L(A_1, \ldots, A_h) = u_1 * A_1 + \cdots + u_h * A_h$. Classical results about sums of finite sets of integers and lattice points will be extended to linear forms. (Received March 09, 2008)