1067-37-1755   **Alica Miller***, Department of Mathematics, University of Louisville, Louisville, KY 40292.
Properties of a semiflow related to the integers.

Let $M_2(\mathbb{Z})$ be the set of all objects of the form $(a\mathbb{Z})X^mY^n$, where a, m, n are integers, $m, n \geq 0$, X, Y variables. We define an operation on $M_2(\mathbb{Z})$ by putting

$$(a\mathbb{Z})X^mY^n \cdot (b\mathbb{Z})X^pY^q = (\mathrm{lcm}(a,b)\mathbb{Z})X^{m+p}Y^{n+q}.$$

With this operation $M_2(\mathbb{Z})$ becomes a semigroup. When naturally acting on itself, it defines a semiflow. We characterize subsemiflows of this semiflow and relate them to some properties of integers. (Received September 21, 2010)