University of Colorado
Department of Mathematics
Problem of the Month
September 2014

Let $\mathbf{x}_i$, $i = 1, 2, \ldots$ be an infinite sequence of vectors in the plane $\mathbb{R}^2$ with integer coordinates. Show that there exists a number n such that every vector in this sequence can be written as a linear combination of the vectors $\mathbf{x}_1, \ldots, \mathbf{x}_n$ *with integer coefficients.*