1046-52-838 **James M. Henle*** (jhenle@smith.edu), Clark Science Center, Smith College, Northampton, MA 01063, and **Frederick V. Henle** (fredhenle@gmail.com), athenahealth, Inc., 311 Arsenal St., Watertown, MA 02472. *Squaring and Not Squaring One or More Planes.*

$X \subseteq \mathbb{N}$ **tiles the plane** if there is a tiling of the plane consisting of exactly one square each of side-length n for every $n \in X$. In [1] we prove that $\mathbb{N}$ tiles the plane. It is easy to show that if X contains every sum of two distinct members of X, then X tiles the plane. We show here that if X contains no such sums then X doesn't tile the plane. We show in addition that the prime numbers do not tile the plane and that there is a set such that it and its complement each tile the plane.

[1] Henle, F. V. and Henle, J. M., "Squaring the Plane," *The Am. Math. Monthly*, 115(1): 3-12, 2008. (Received September 12, 2008)