1125-05-745 **aBa Mbirika*** (mbirika@uwec.edu). *Lattice point visibility on straight and curved lines of sight.*

An integer lattice point (x, y) is visible from the origin along a straight line of sight if and only if the greatest common divisor of x and y equals one—equivalently, if x and y are relatively prime. It is known that approximately 40 percent of the integer lattice is hidden from view from the origin along these straight lines of sight. We give an elementary number theory proof of this fact. Remarkably, arbitrarily large $n \times n$ squares of hidden points can be found in this 40 percent of the integer lattice. We use the Chinese Remainder Theorem to give a proof of this fact. A natural question to ask is what changes if we have curved lines of sights from the origin? In particular, we focus our attention on lines of sight given by power functions of the form $f(x) = ax^b$ where $a \in \mathbb{Q}$ and $b \in \mathbb{N}$. This is joint work with my undergraduate research students at the University of Wisconsin-Eau Claire. (Received September 10, 2016)