

1077-VL-2396 **Kristina J Woodside*** (woodsidekj@jay.washjeff.edu), 50 S. Lincoln Street, Washington, PA 15301. *Tiling Deficient Chessboards with n -Polyominoes.*

An $m \times m$ board is called *deficient* if a 1×1 square is missing from anywhere on the board. An n -polyomino is a geometric shape formed by placing n equal squares edge to edge. With a fixed n , we prove that all deficient $m \times m$ boards can be tiled using n -polyominoes such that $m^2 - 1$ is divisible by n . We offer results for $n = 3$, $n = 4$, and $n = 5$, and we discuss our progress toward a generalization for all n . (Received September 22, 2011)