1125-05-2175 **Brendan W Sullivan*** (sullivanb@emmanuel.edu), 400 The Fenway, Boston, MA 02115, and **Nikolas Townsend** and **Mikayla Werzanski**. *The 3×3 Rook's graph is the unique smallest graph with lazy cop number 3.*

In the pursuit-evasion game *cops and robbers*, a team of cops and a robber occupy vertices of a connected graph and alternately move along its edges. The minimum number of cops required to catch the robber is called the *cop number* (denoted c). Previous work by Beveridge et al. has shown that the Petersen graph is the unique smallest graph which requires three cops: it's the only graph on 10 vertices with $c = 3$, and all graphs on 9 or fewer vertices have $c \leq 2$. (This result was previously found by Baird & Bonato via computational search.)

In the variant *lazy cops and robbers*, the cops may only choose one member of their squad to make a move when it's their turn. Analogously to Beveridge's result, we have found the 3×3 Rook's graph ($R_3 = K_3 \square K_3$ with 9 vertices) is the unique smallest graph with $c_L = 3$. We will share a self-contained proof of this fact. In addition, we will share computational results for graphs on 10 or more vertices, hunting for distinct structures that necessitate 3 lazy cops. Finally, we will share progress made towards the general conjecture that R_n is the unique smallest graph with $c_L = n$. (Received September 19, 2016)