

# Tetris, Tri-Ominoes, and De Bruijn Polyominoes

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A polyomino is a connected shape on the plane constructed by gluing together unit squares edge-to-edge. There are 16 ways to color the cells of a fixed square tetromino either black or white. Can you find the smallest polyomino with cells colored black or white that includes all sixteen ways of coloring?

This research conducted in Polymath REU 2023 answers this question. In the talk, we will look at De Bruijn numbers and how it helps to construct a solution. We will also explore “n-prismatic polyominoes” building upon the problem.

**Wednesday, Nov 29, 7:00 p.m. in Park 245 or via Zoom**

**Zoom Link:**

**[https://brynmawr-edu.zoom.us/j/95807982212?](https://brynmawr-edu.zoom.us/j/95807982212?pwd=aXBBMnFZMUUyWDQ1S1d3TGozc0t5Zz09)**

**[pwd=aXBBMnFZMUUyWDQ1S1d3TGozc0t5Zz09](https://brynmawr-edu.zoom.us/j/95807982212?pwd=aXBBMnFZMUUyWDQ1S1d3TGozc0t5Zz09)**

**Meeting ID: 958 0798 2212 Passcode: 792030**

Snacks will be provided in the Math Lounge starting at 6:30 p.m.