

Quads: A SET-like Game With a Twist

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Abstract: Quads is a card game similar to SET, with 81 cards, each containing 1–4 objects in one of 4 colors and one of 4 shapes. The goal of the game is to find “quads”, which are sets of 4 cards that satisfy a particular pattern. We will explore several mathematical properties of this game, including the question of how many cards you must lay down to guarantee a quad.



Dr. Lauren Rose is a mathematics professor at Bard College. Her research areas include algebraic combinatorics, finite geometry, and recreational math. She enjoys mentoring students in both research and outreach, and is the inventor of several mathematical games. She has held leadership roles in the Math Circle and Undergraduate Research communities, is a member of the MoMath advisory council, and in 2022 was made a Fellow of the

Association for Women in Mathematics. She is passionate about making deep mathematics fun and accessible to diverse populations.