Recreational graph theory

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Graph theory has been developed not only with its various applications for solving problems in the real life but also for discovering the playful exploration of networks, uncovering patterns and structures that lie beneath the surface of interconnected vertices and edges. The exploration of such things is usually called recreational graph theory. This topic delves into mathematical puzzles, games, and problems that can be framed within the realm of graph theory, offering insights into their underlying structures and properties. Through games and puzzles, understanding graph theory concepts such as paths, cycles, connectivity, coloring, labeling and other graph problems becomes easier and deeper in a fun and accessible way. In this presentation, the various recreational aspects of graph theory from solving classic puzzles such as the seven bridges of Königsberg and knight's tour to the exploration of graph coloring and graph labeling will be discussed. Related research to these problems will also be presented.

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