

## A Combinatorial Game On Graphs

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Define a vertex domination game on graphs in the following way: given a graph, two players take turns choosing a vertex on a graph. Once a vertex is chosen, it and all neighbors are removed. The last player to have the ability to choose a vertex wins the game. In this talk, conditions for which player will win on certain classes of graphs are given, as well some of the methods used to find these conditions. In particular, some families of graphs, such as paths, reduce to other well studied combinatorial games.

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