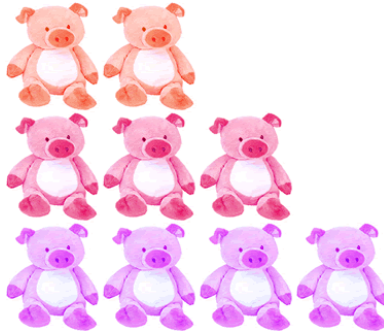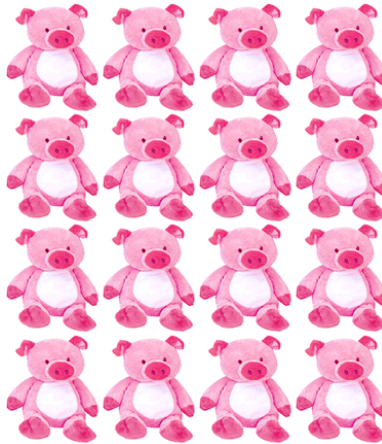# Wolf Nim

This is a game for two wolves.

Wolves take turns eating any number of pigs in the same row. The wolf that eats the last pig loses because he is considered greedy.

Extensions:

- Which pigs should the first wolf eat in order to make sure of winning?
- Which pigs should the first wolf eat if the wolves changed their morals so that greediness (and eating the last pig) is a virtue?
- The wolves got tired of eating so slowly so they devised a game with 16 pigs in a square pen. Each turn a wolf stretched a horizontal or vertical wire between the pigs and then ate all the pigs on one side of the wire.

Will the first or second wolf win if both play well?

The Math in This Problem:

Wolf Nim is structured with pigs lined up beside one another in rows and columns. In this math fair game, students are challenged to strategize a way to have their opponent be the one to eat the last pig. After playing this game with different variations of rows and columns, students are tested to observe the advantages or disadvantages of being the first player to move.