

Stone Piles – A Variation of Nim

by

Ryan Morrill

University Of Alberta

We will be analyzing a game that is similar to the usual game of Nim. Players Peter and Betty are alternating turns in a game with m piles of n stones each. Peter is allowed to take 1, 2, or 3 stones, all from any single pile. Betty is allowed to take 1, 2 or 3 stones, all from different piles. Determine for each n and m who has the winning strategy, according to who moves first.