

GAMES

Game #1

This is a two person game. Begin with a pile of 10 chips. Players alternately remove 1, 2, or 3 chips from the pile. The player to remove the last chip wins. Find and justify a winning strategy.

Game #2

This is a two person game. Begin with the number zero. This is the initial sum. Players alternately add 1, 2, 3, 4, 5, or 6 chips to the sum. The player to achieve the sum of 50 wins. Find and justify a winning strategy.

Game #3

This is a two person game. Begin with three piles of chips containing 3 chips, 5 chips, and 7 chips, respectively. Players alternately remove 1 or more chips from any *one* pile. The player to remove the very last chip (leaving all piles empty) wins. Find and justify a winning strategy.

REFLECTIONS

1. What did these games have in common?
2. What general principles and concepts did you use or develop to tackle the games?
3. Create another game that might yield to these methods.