

The 15 Game

The Rules

This is a two player game. You have 9 cards, numbered 1 up to 9 face up on the table in front of you. At each turn, you may take one card and add it to your hand. The winner is the first player who has a set of three cards which sum to 15.

We can imagine the following game between Alice and Bob, Alice goes first:

Alice: 4

Bob: 8

Alice: 9

Bob: 7

Alice: 6 (note that Alice hasn't won yet having 9 and 6 does not win, as they are only two cards)

Bob: 3

Alice: 2

Alice wins, as she has $\{9,4,2\}$ in her hand, and $9+4+2 = 15$.

Exercise: Play the game a few times, taking it in turns to go first. Does it remind you of anything? Which player do you think should be able to win? Can you see a winning strategy for either player?