LET THE GAMES BEGIN !!!

The Game of 21.

Form teams to play the game of 21. The first team chooses a number between 1 and 3. Then, the opposite team adds a number from 1 to 3, and the teams continue in this fashion. The first team to get to 21 wins.

Example

Team 1	Team 2
2 (2)	3 (5)
1 (6)	3 (9)
2 (11)	1 (12)
3 (15)	1 (16)
2 (18)	3 (21) WINS

Each time you play, think about the winning strategy.

The Game of 15.

Two teams take turns choosing numbers from 1 to 9. Numbers cannot be repeated. First team to be able to add its three numbers to 15 wins.

Example:

Team 1	Team 2
6	8
4	5 (Team 1 threatened to select 5)

2 (Team 2 threatened to select 2)

Now Team 2 loses sine Team 1 can choose 7 (6 + 2 + 7 = 15) or 9 (2 + 4 + 9 = 15).

Each time you play, think about the winning strategy.

Tic-Tac-Toe

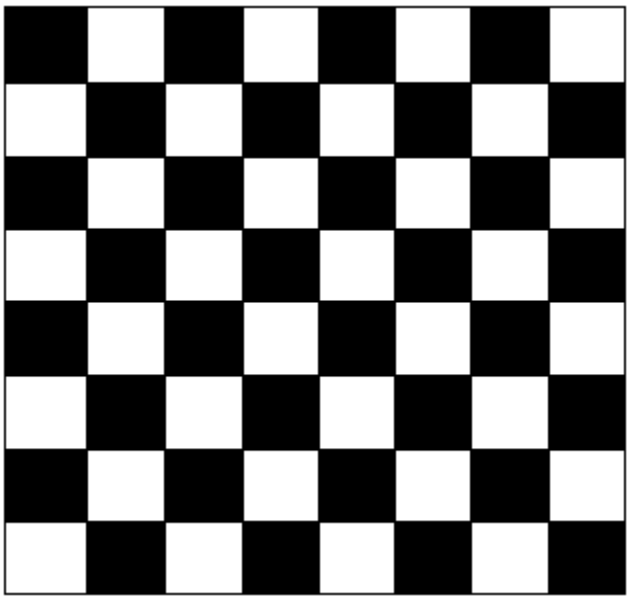
What is the best strategy to start the game?

Reversed Tic-Tac-Toe

Now whoever has three in a row loses! Who has the advantage now? What is the best strategy to start the game?

The Game of CRAM

Two players take turns placing dominos on a checker board. There can only be one domino on any square. Whoever cannot make a legal move loses. Who has an advantage in this game and how to play it?



The Game of Hanoi Towers

There are three pegs with 9 pieces on one peg, arranged from the largest (bottom) to the smallest (top).

The object of the game is to move all the pieces to another peg BUT you cannot ever place a larger piece on a smaller piece.

Can this be done? Use Polya's advice: "if there is problem you cannot solve, fine a similar easier problem and solve it."

Solve the problem for 2 pieces first.

Solve it for three pieces.

Solve it for four pieces.

Do you see the pattern?