

1. This game begins with two piles, each with 11 counters. A turn consists of taking two counters from one pile and one from the other. The player who makes the last move wins. With best play, who wins?
2. The numbers 1 through 20 are written in a row. Players take turns putting plus or minus signs between the numbers. When all such signs have been placed, the resulting expression is evaluated. There are no parentheses, so how do we evaluate the expression? If the result is even, the first player wins. Who wins this game and how?
3. Two players take turns placing identical bishops on a chess board so that no bishop threatens another. The winner is the last to place a piece on the board. Again, who wins with best play and how?
4. Now the players put knights on the board. Who wins and how?
5. Now the players put kings on the board. Who wins and how?
6. Now the players put queens on the board. Who wins and how?