Name: _____

Pid: _____

1. Two players are put bishops on the chessboard one by one so that each new bishop is not attacked by the previously placed bishops. If a player cannot make a move, the player loses. Determine the winning strategy. *Use symmetric strategies.* (One bishop attack another if they are on the same diagonal.)

Solution:

2. Consider the Misére subtraction game where players may subtract 1, 2 or 5 chips on their turn, identify the N- and P-positions. (Recall that the definition of P- and N-positions in the Misére games is the same, but the terminal positions are N-positions).

Solution:

3. Two players play the following game: on each step they move a rook up or to the right (on any number of squares); the rook begins on a1. Determine who wins in this combinatorial game.

Solution:

4. Find the Sprague–Grundy function for the subtruction game with the subtraction set $\{1, 3, 5\}$.

Solution: