Heuristic Analysis

1.) Player move opposition using subtraction with pursuit amplifier

2.) Player move opposition using division

3.) Free Spaces Surrounding Player

1.) The heuristic is similarly to the sample improved player heuristic whereby the players moves are subtracted from the opponents moves. However, I wanted the evaluation function to increase the weight of the opponents moves over time. To calculate the progression of the board I used how many blank spaces were available at the given board state.

Results:

ID_Improved = ~65% and Student = ~72%

2.) Same idea as improved heuristic but instead of subtraction I wanted to try division. Since we're using division the algorithm checks to see if either own_moves or opponents_moves are 0 and assigns +/- infinity or, in case of a draw, -10.

Results:

ID_Improved = ~68% and Student = ~71%

3.) I was trying to find a way to use blank spaces more effectively but I though the overall count of blank spaces was less important than the surrounding spaces around a player. Therefore, I calculated the surrounding spaces for both players and subtracted them.

Results:

ID_Improved = ~ 70% and Student = ~65%