For my heuristic score. My first heuristic score is quite simple. I used the difference in number of my moves against number of opponent moves. The first one is representative of simple heuristic approach. Its advantage is that it will be fastest to calculate. Thus, it is believed to be **able to go deepest in Iterative Deepening Search**.

For my second heuristic score, I think that number of my moves in one stage is not enough. So, I expanded it into two stages of number of my moves. By doing this there will be two level of order that can be played. However, there could be duplication in the score position. Therefore, I removed all duplication of that player's OWN position. (For example, final position of 2nd order can be achieved by different 1st order position) I think importance of second order moves is halved of first order moves. By this way, this heuristic score will be **smarter, but have higher cost**(time) in evaluating the board.

My third heuristic score is applied from Alpha Go Strategy. It applied convolutional network to evaluate each value of entire board position. So, in Isolation, I simulated and found that, highest order is about seventh. Therefore, I did search 7th level of available moves and plot it in board manner. The thing that is different than second heuristic is that, the duplication is counted in BOTH player position such that higher level is given higher priority and will be counted only once. By this way, the board will be similar to value network in Alpha Go. In my view, this heuristic score should be **smartest among three, but will have highest cost(time)** in evaluation the score function.

My recommendation is as follows; if hardware is fast enough, I suggest that third heuristic score should be applied. However, if opponent is smart in the way that could figure out how to block position in higher order that leads to large deeper lower order, using second heuristic score may be better in the way that lower order around third level is not counted.

Refers to tournament result, it is seen that AB_Custom_3 is the best. All heuristic is better than AB_Improved. However, my ID forfeited 21 games. This imply that my heuristic score took too long to compute Score (suspected in AB_Custom_3).

	Playing Matches												

Match #	Opponent AB_Imp		roved AB_Cu		ustom	AB_Cus	stom_2	AB_Cus	stom_3				
		Won	Lost	Won	Lost	Won	Lost	Won	Lost				
1	Random	7	3	8	2	9	1	10	0				
2	MM_Open	8	2	7	3	8	2	7	3				
3	MM_Center	8	2	9	1	9	1	10	0				
4	MM_Improved	8	2	9	1	9	1	10	0				
5	AB_Open	6	4	5	5	6	4	7	3				
6	AB_Center	6	4	6	4	4	6	9	1				
7	AB_Improved	4	6	6	4	6	4	5	5				
	Win Rate:	67.1%		71.4%		72.9%		82.9%					
Your ID s	earch forfeit	ed 21.0	games	while	there	were st	till le	gal mov	ves avail	lable to	play.		