Heuristic Function 0 – This function calculates **number of my moves left**. This is a straightforward evaluation function, where the higher the number of my moves left, the better the chance that I will win.

"""
Heuristic0 is to find out the no of my moves available and calculate the score based on the no of available moves.
"""

```
def heuristic0(game, player):
    my_moves = len(game.get_legal_moves(player))
    score = game.utility(player) + float(my_moves)
    return score
```

Heuristic Function 1 – This function calculates **number of my moves left - number of the opponent's moves left**. This evaluation function tries to encourage the advantage of me against my opponent, i.e. the more moves left for me than for my opponent, the better the chance I will win.

"""
Heuristic1 is another evaluation function to find out the difference between no of my moves and no of opponent moves available and calculate the score based on the difference.
"""

```
def heuristic1(game, player):
    my_moves = len(game.get_legal_moves(player))
    opponent_moves =
len(game.get_legal_moves(game.get_opponent(player)))

    score = game.utility(player) + float(my_moves - opponent_moves)
    return score
```

Heuristic Function 2 – This function calculates **number of my moves left - 2 * number of the opponent's moves left**. This evaluation further awards the advantages of me against my opponent with a stricter manner than Heuristic1, by giving the opponent moves a weight of 2.

"""
Heuristic2 is another evaluation function, which is an aggressive version of heuristic1 function and will make our player to chase after the opponent. The function will find out the difference between no of my moves and 2 times of no of opponent moves available and calculate the score based on the difference.
"""

```
def heuristic2(game, player):
    my_moves = len(game.get_legal_moves(player))
    opponent_moves =
len(game.get_legal_moves(game.get_opponent(player)))

    score = game.utility(player) + float(my_moves - 2 * opponent_moves)
    return score
```

	Heuristic 0	Heuristic 1	Heuristic 2
ID_Improved	62.86%	70.00%	67.14%
Student	66.43%	72.86%	67.86%

As shown in the above table, all three heuristic functions beat the ID_Improved by marginal advantage.