Question 4 – Policy Iteration Agent

The policy iteration agent implemented in Question 3 was tested against each of the rule-based agents provided (i.e., random, aggressive, and defensive) for 50 times. The results of these tests were as follows:

Against random agent:

When Policy iteration agent was X and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Policy iteration agent was O and started first:

Played: 12 Won: 11 Lost: 0 Draw: 1

When Policy iteration agent was X and started second:

Played: 12 Won: 10 Lost: 0 Draw: 2

When Policy iteration agent was O and started second:

Played: 14 Won: 10 Lost: 0 Draw: 4

Total: 50 Won: 43: Lost: 0 Draw: 7

Against aggressive agent:

When Policy iteration agent was X and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Policy iteration agent was O and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Policy iteration agent was X and started second:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Policy iteration agent was O and started second:

Played: 14 Won: 14 Lost: 0 Draw: 0

Total: 50 Won: 50 Lost: 0 Draw: 0

Against defensive agent:

When Policy iteration agent was X and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Policy iteration agent was O and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Policy iteration agent was X and started second:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Policy iteration agent was O and started second:

Played: 14 Won: 14 Lost: 0 Draw: 0

Total: 50 Won: 50 Lost: 0 Draw: 0