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COM S 472  
Project 2 Report

For the constant C, I set this value to 1.00, instead of  $\sqrt{2}$ . For this, I played 20 total games against the AI agent, the first 10 were with the modified (C=1), and the second 10 games were with the default value for C.

For this, I simply outputted the average score value of the node of the selected move. In, the project, the value is represented by:

```
return (this.explorations == 0) ? 0 : this.wins/this.explorations;
```

I then collected the values of each move, and whether the game was won or lost by my (the user). Based on these results, I found that when C is 1, the average score for each node was 0.277, compared to the default value of 0.189. The median was also larger (0.133), compared to the default value (0.060).

Based on these statistics, I'd argue that the modified C value was more confident in its moves. This is shown by the number of wins the AI pulled off (9 wins, 1 loss), compared to the default AI (7 wins, 3 losses).

To ensure the accuracy of this data in the future, I would have alternated the C values each game, to account for myself getting better at Checkers as I play more. Attached is the Excel file with all of the data.