

## **Constraints for a Fair Showcase-Showdown Game**

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### **Abstract**

In a general showcase-showdown game, each of  $k$  ( $k = 2$  or  $3$ ) players in turn spins the wheel once or twice, and then waits for the results of the succeeding players' spin(s). A player whose total score exceeds the limit of the game is immediately eliminated. If there is a tie, then one more spin-off is needed to determine the final winner. Apparently the game is not a fair one even each player plays optimally. In our study we find that some natural constraints can be imposed on the later players in order to have a fair game.

*Keywords:* Optimal Stopping Boundary, Optimal Strategy.