

Meeting: 1003, Atlanta, Georgia, MAA CP A1, MAA Session on Getting Students To Discuss and To Write About Mathematics, I

1003-A1-428 **Christopher J Lacke*** (lacke@rowan.edu), Math Department, 201 Mullica Hill Rd., Glassboro, NJ 08028. *Going All In — Taking a Gamble on a Poker Project in an Undergraduate Probability Course.*

The popularity of poker, especially No-limit Texas Hold'em, is evident in the variety of poker shows on television. A feature of these shows is a listing of the probabilities of winning the hand at various points in the game.

This paper discusses one of a series of projects that I use in an introductory, post-calculus probability course, in which students have to calculate and explain their calculations of the probabilities of winning a hand in episodes of Celebrity Poker.

The students have to perform the analysis from two perspectives. First, they act as the viewer, calculating probabilities of having the winning hand while knowing the two "down" cards that are held by each player, including those held by people who have folded prior to the flop. Second, they are assigned to be one of the specific players, having no knowledge as to the values of the other down cards.

My presentation will involve more detail about the project, the benefits of using this project, along with potential pitfalls, as well as the students' feelings about the project. I will supply examples of strong, as well as weak projects, and discuss the effects on learning the subject and increasing student interest. Video clips of the game will be presented for those who are unfamiliar with it. (Received September 14, 2004)