

1125-VP-2829      **Gerald Y Agbegha\*** (gagbegha@ggc.edu), 1000 University Center Lane, School of Science and Technology, Lawrenceville, GA 30043. *Towards Developing Strategies for Winning at Pick-n Lotteries*. Preliminary report.

The state pick-n lotteries include the pick 3, pick 4, and pick 5 games. In place of the “pick” some states use “cash”. It is generally believed that there is no way to predict the pick-n lotteries. We use combinatorial techniques such as solution of integer equations, the principle of inclusion-exclusion and permutation of multisets to determine the distribution of link degrees. The distribution of these link degrees point to some wining strategies for these games. Empirical tests are performed using actual lottery data from some states in the US. (Received September 20, 2016)