

1106-H5-401 **Patrick Sullivan*** (patrick.sullivan@valpo.edu), 1900 Chapel Dr, Valparaiso, IN 46383. *The FA Cup Draw and Pairing Up Probabilities.*

The FA cup is one of the most famous soccer tournaments in the world. It is open to English clubs at several levels of competition, including the top English professional leagues. The tournament begins to draw worldwide attention in the third round when the Premier League teams, some of the best professional teams in the world, join the competition. At this stage there are 64 teams in the tournament, the 20 teams from the Premier League and 44 other English teams. The teams are then randomly paired up for the games of the third round. (This is very different from most single elimination tournaments. Usually the matchups are determined by a seeding process where the strongest teams are intentionally matched up against weaker teams.) The games of the third round of the FA cup that generate the most interest are the ones in which Premier League teams are matched up against each other. I became interested in the probability distribution of the number of such games in a random draw. In this talk we will look at this distribution, its expected value and variance as well as some combinatorial results from these computations. We will also generalize to situations where other numbers of teams are involved. (Received August 27, 2014)