

1106-05-2400

Curtis Clark* (curtis.clark@morehouse.edu), Department of Mathematics, Morehouse College, 830 Westview Drive, Atlanta, GA 30314. *On 2 – 2 Graph Achievement Games*. Preliminary report.

Let F be a graph with no isolated vertices. The 2 – 2 F -achievement game on the complete graph K_n is described as follows. Player A first colors two edges of K_n green. Then Player B colors two different edges of K_n red. They continue alternatively coloring the edges with Player A coloring two edges green and Player B coloring two edges red. The graph F is achievable on K_n if Player A can make a copy of F in his color. The minimum n such that F is achievable on K_n is the 2 – 2 achievement number of F , $a(F)$. The 2 – 2 move number of F , $m(F)$, is the least number of edges that must be colored by Player A to make F on the complete graph with $a(F)$ vertices. We determine $a(F)$ and $m(F)$ for some small graphs, paths, and cycles. Then we compare these results with those for 1 – 1, 2 – 1, and 1 – 2 graph achievement games. (Received September 16, 2014)