

1099-05-15

Deborah C. Arangno* (darangno@yahoo.com) and **David E. Brown**, Department of Mathematics and Statistics, 3900 Old Main Hill, Logan, UT 84322-3900. *Edge-Avoiding and F-Avoiding Hamiltonicity in Bipartite Graphs.*

In this paper, we will examine the conditions under which a bipartite graph has a Hamiltonian cycle that avoids a specified set of edges, or a subgraph F . Such a graph is called “edge-avoiding” or “ F -avoiding” Hamiltonian, respectively, originally studied by Harris, Ferrara and Jacobson, for non-bipartite graphs. We will introduce a version of Bondy-Chvátal’s Theorem, which states that a graph is Hamiltonian if and only if its closure is Hamiltonian, and which we will define for the bipartite case.

Keywords: cycles, Hamiltonicity, Bondy-Chvátal, bipartite graph (Received November 18, 2013)