Meeting: 1004, Bowling Green, Kentucky, SS 2A, Special Session on Graph Theory

1004-05-148   **Nawarat Ananchuen** (`nawarat@su.ac.th`), Department of Mathematics, Silpakorn University, 73000 Nakorn Pathom, Thailand, and **Michael D Plummer*** (`michael.d.plummer@vanderbilt.edu`), Department of Mathematics, Vanderbilt University, Nashville, TN 37240. *Connectivity and matching in 3-vertex-critical claw-free graphs.*

The cardinality of any smallest dominating set in a graph G is called the *domination number* of G and denoted by $\gamma(G)$. Graph G is said to be *3-vertex-critical* if $\gamma(G) = 3$, but $\gamma(G - v) = 2$, for every vertex v in G. For $|V(G)| \equiv k(\mathrm{mod}\,2)$, graph G is said to be *k-factor-critical* if $G - S$ contains a perfect matching for every $S \subseteq V(G)$ with $|S| = k$.

In this paper several new results about connectivity and k-factor-criticality are presented for 3-vertex-critical graphs which are also claw-free. (Received January 23, 2005)

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