Discrete Mathematics Seminar

Time: Friday, 18 September 2015, 2:00 – 3:00 PM
Location: 237 Derrick Hall
Title: A Result Related to Vizing's Conjecture
Speaker: Mr. Randy Davila, Department of Mathematics

Abstract:

For an integer $k \geq 1$, a (distance) k-dominating set of a graph G is a set S of vertices of G, such that every vertex of $V(G) \setminus S$ is at distance at most k from some vertex of S. The minimum cardinality of a k-dominating set of G is its (distance) k-domination number, denoted $\gamma_k(G)$. In this talk we introduce and prove a new inequality related to the well studied Vizing's Conjecture (open since 1968). In particular, we show $\gamma_1(G \,\square\, H) \geq \gamma_2(G)\gamma_2(H)$, where $G \,\square\, H$ denotes the cartesian product of simple graphs G and H.