An introduction to (C, R)-domination problems

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Abstract

Let $G = (V, E)$ be a graph with vertex set V and edge set E. Given positive integer C, R, we say the number $\theta_{C,R}(D) = b|N(D)| - a|D|$ is (C, R)-*dominating number* of D for some vertex subset D. The (C, R)-*domination number* of G, denoted by $\theta_{C,R}(G)$, is the maximum cardinality of $\theta_{C,R}(D)$ for each $D \subseteq V$. For (C, R)-*dominating number*, We give some lower bounds and give exact values for some special graphs.

Keywords: (C, R)-dominating number, Cartesian product, path

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