Bermudo, Sergio; Rodríguez-Velázquez, Juan A.; Sigarreta, José M.; Yero, Ismael G.
On global offensive $k$-alliances in graphs. (English) Zbl 1208.05096

Summary: We investigate the relationship between global offensive $k$-alliances and some characteristic sets of a graph including $r$-dependent sets, $\tau$-dominating sets and standard dominating sets. In addition, we discuss the close relationships that exist among the (global) offensive $k_i$-alliance number of $\Gamma_i$, $i \in \{1, 2\}$, and the (global) offensive $k$-alliance number of $\Gamma_1 \times \Gamma_2$, for some specific values of $k$. As a consequence of the study, we obtain bounds on the global offensive $k$-alliance number in terms of several parameters of the graph.

MSC:
05C69 Vertex subsets with special properties (dominating sets, independent sets, cliques, etc.)

Keywords:
offensive alliances; dominating sets; dependent sets

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References:

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