

**CONGRUENT DOMINATION NUMBER OF SOME CYCLE
RELATED GRAPHS**

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Abstract: A dominating set $D \subseteq V(G)$ is said to be a congruent dominating set(CDS) of G if

$$\sum_{v \in V(G)} d(v) \equiv 0 \left(\text{mod } \sum_{v \in D} d(v) \right)$$

The minimum cardinality of a minimal congruent dominating set of G is called the congruent domination number of G which is denoted by $\gamma_{cd}(G)$. We investigate congruent domination number of some cycle related graphs.

Keywords and Phrases: Dominating Set, Domination Number, Congruent Dominating Set, Congruent Domination Number.

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1. Introduction and Preliminaries

The domination in graphs is one of the concepts in graph theory which has attracted many researchers to work on it due to its potential to solve the real life problems involving design and analysis of communication network as well as defence surveillance. Variety of domination models are available in the existing literature.