SIGNED 2-INDEPENDENCE NUMBER OF SOME DIGRAPHS

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In this paper, we give the exact values of about signed 2-independence number of the cartesian product of directed cycles. A function \( f : V(D) \to \{-1, 1\} \) defined on the vertices of a digraph \( D = (V(D), A(D)) \) is called a signed 2-independence function if \( f(N^-[v]) \leq 1 \) for every \( v \) in \( D \). The weight of a signed 2-independence function is \( f(V(D)) = \sum_{v \in V(D)} f(v) \). The signed 2-independence number of a digraph \( D \), denoted by \( \alpha^2(D) \), equals the maximum weight of a signed 2-independence function on \( D \). In this paper, the exact values of \( \alpha^2(C_m \times C_n) \) are determined.

REFERENCES