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The dominator partition in hypercubes

In a graph $G(V, E)$, a vertex $v \in V$ is a dominator of a set $S \subseteq V$ if $S \subseteq N[v]$. $\Pi = \{V_1, V_2, \dots, V_k\}$ of $V(G)$ is called dominator partition if every vertex $v \in V$ is a dominator of at least one class V_j in Π . $\pi_d(G)$ is the minimum cardinality of a dominator partition of G . It is known that $\gamma(G) \leq \pi_d(G) \leq \gamma(G) + 1$, where $\gamma(G)$ is the domination number of G . We show that $\pi_d(Q_n) = \gamma(Q_n) + 1$ where Q_n is an hypercube.