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STAR–IN–COLORING OF THETA AND PLUS GRAPHS

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ABSTRACT

A digraph $G = (V, E)$ is said to admit star–in–coloring if it satisfies the following two conditions: (i) no path of length three is bicolored (ii) if any path of length two with terminal vertices are of the same color, then the edges must be oriented towards the middle vertex. In this paper we prove that path union of theta graph T_α, open star of theta graph $S(n.T_\alpha)$, one point union for path union of theta graph $P_n^t(t.n.T_\alpha)$, plus graph Pl_n,path union of plus graph Pl_n, open star of plus graph $S(t.Pl_n)$, one point union for path union of plus graph $P_n^t(t.n.Pl_m)$ are star–in–coloring graphs.

KEYWORDS: *Coloring; Star–in–Coloring; Star–in–Chromatic Number; Plus Graph; Theta Graph.*