

Disjoint Paths in Graphs II, A Special Case

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Abstract. Let G be a graph, $\{a, b, c\} \subseteq V(G)$, and $\{a', b', c'\} \subseteq V(G)$ such that $\{a, b, c\} \neq \{a', b', c'\}$. We say that $(G, \{a, c\}, \{a', c'\}, (b, b'))$ is an *obstruction* if, for any three vertex disjoint paths from $\{a, b, c\}$ to $\{a', b', c'\}$ in G , one path is from b to b' . In this paper we characterize a special class of obstructions. This will be used to characterize all obstructions.

Keywords: disjoint paths, linkage, planar graph

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