DISTRIBUTION OF CONTRACTIBLE EDGES AND
THE STRUCTURE OF NONCONTRACTIBLE EDGES
HAVING ENDVERTICES WITH LARGE DEGREE
IN A 4-CONNECTED GRAPH

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Abstract

Let G be a 4-connected graph G , and let $E_c(G)$ denote the set of 4-contractible edges of G . We prove results concerning the distribution of edges in $E_c(G)$. Roughly speaking, we show that there exists a set $\mathcal{K}_0$ and a mapping $\varphi : \mathcal{K}_0 \rightarrow E_c(G)$ such that $|\varphi^{-1}(e)| \leq 4$ for each $e \in E_c(G)$.

Keywords: 4-connected graph, contractible edge, cross free.

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