On The Edge-face Total Chromatic Number of Pseudo-Halin Graphs with $\Delta(G) \geq 6$\textsuperscript{1}

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Abstract: For a 2-connected plane graph $G$, $f_0$ is a face without chord on its boundary (a cycle), and all vertices of $V(f_0)$ are at least 3. If remove all edges on the boundary of $f_0$, $G$ become a tree $T$ which the degree of vertices except vertices of $V(f_0)$ is at least 3, then $G$ is called a Pseudo-Halin graph, $G$ is said to be Halin graph if all vertices of $V(f_0)$ is degree 3, and the minimum number $\chi_e(G)$ of colors used to color all elements in $E \cup F$ such that any adjacent or incident elements of $E \cup F$ is colored with distinct color is called the edge-face total chromatic number of $G$\textsuperscript{2}. In this paper, we have proved that for any Pseudo-Halin graph $G$ with $\Delta(G) \geq 6$, have $\chi_e(G) = \Delta(G)$.

Keywords: Pseudo-Halin graph, edge-face total chromatic number.

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