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STRONG CHROMATIC INDEX OF PLANAR GRAPHS WITH LARGE GIRTH[1]

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Abstract

Let $\Delta \geq 4$ be an integer. In this note, we prove that every planar graph with maximum degree Δ and girth at least $10\Delta+46$ is strong $(2\Delta-1)$-edge-colorable, that is best possible (in terms of number of colors) as soon as G contains two adjacent vertices of degree Δ. This improves [6] when $\Delta \geq 6$.

Keywords: planar graphs, edge coloring, 2-distance coloring, strong edge-coloring.

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