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On the total coloring of planar graphs. (English) Zbl 0653.05029

J. Reine Angew. Math. 394, 180-185 (1989).

By Behzad and Vizing's conjecture (1968), $\kappa_t(G) \leq \Delta(G) + 2$, where $\kappa_t(G)$ is the total chromatic number and $\Delta(G)$ - the maximal degree of a graph G . For planar graphs G it is proved here that $\kappa_t(G) \leq \Delta(G) + 2$ if $\Delta(G) \notin \{6, 7, 8\}$, $\kappa_t(G) \leq \Delta(G) + 3$ always, and $\kappa_t(G) = \Delta(G) + 1$ if $\Delta(G) \geq 14$.

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MSC:

[05C15](#) Coloring of graphs and hypergraphs

[05C10](#) Planar graphs; geometric and topological aspects of graph theory

Cited in **5** Reviews
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Keywords:

total chromatic number; maximal degree; planar graphs

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