

Borodin, O. V.; Kostochka, A. V.; Woodall, D. R.

Total colorings of planar graphs with large maximum degree. (English) Zbl 0883.05053
J. Graph Theory 26, No. 1, 53-59 (1997).

The authors prove that for any planar graph G with maximum degree $\Delta \geq 11$, its total chromatic number $\chi_T(G) = \Delta + 1$. This result improves an earlier result due to the same authors. The proof begins by finding some “reducible configurations” of a minimum counterexample $G = (V, E)$ (a counterexample with $|V| + |E|$ minimum) and then using “discharging” to obtain a contradiction.

Reviewer: [H.P.Yap \(Singapore\)](#)

MSC:

- [05C15](#) Coloring of graphs and hypergraphs
- [05C10](#) Planar graphs; geometric and topological aspects of graph theory
- [05C35](#) Extremal problems in graph theory

Cited in **46** Documents

Keywords:

[planar graph](#); [maximum degree](#); [total chromatic number](#)

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