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A GENERALIZATION OF A RESULT OF DIRAC

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Let G be a graph, $\chi(G) = r$ and $\text{cl}(G) < r$. Dirac has proved in [2] that for such graph $|V(G)| \geq r + 2$ and $|V(G)| = r + 2$ only if $G = K_{r-3} + C_5$. The main result in the current article generalizes the proposition mentioned above (Theorem 2.1). As a consequence of Theorem 2.1, some results for Folkman graphs are obtained (Theorems 7.1–7.4, 8.1).

Keywords: chromatic number, Folkman graph, α -critical graph

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