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Generalized Ramsey numbers involving subdivision graphs, and related problems in graph theory. (In English)

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If G and H are Graphs, $r(G, H)$ denotes the smallest positive integer r so that if the edges of K_r, the complete graoh on r vertices, are colored with two colors, the there is either a copy of G with all of its edges colored with the forst color or a copy of H with all of its edges colored with the second color. *V.Chvátal* [J. Graph Theory 1, 93 (1977; Zbl 351.05120) proved that if T is any tree on n vertices, then $r(T, K_\ell) = (\ell-1)(n-1)+1$. It is clear then that $(\ell-1)(n-1)+1$ is a lower bound for $r(G, K_\ell)$ where G is any connnected graph on n vertices. A connected graph G on n vertices for which $r(G, K_\ell) = (\ell - 1)(n - 1) + 1$ is said to be ℓ-good. The subdivision graph of G, denoted by $S(G)$, is formed by putting vertex on every edge of G. The authors prove that for $n \geq 8$, $S(K_n)$ is 3-good. The actually show that, for $n \geq 8$, the graph consisting of the subdivision graph of K_n together with all of the edges of K_n is 3-good.

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