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Some complete bipartite graph-tree Ramsey numbers. (In English)

Graph theory in memory of G. A. Dirac, Pap. Meet., Sandbjerg/Den. 1985, Ann. Discrete Math. 41, 79-89 (1989).

[For the entire collection see Zbl 656.00008.]

For graphs G and H , the Ramsey number $r(G, H)$ is the smallest positive integer n so that every 2-coloring of the edges of K_n , the complete graph on n vertices, contains either a copy of G with all of its edges colored with the first color or a copy of H with all of its edges colored with the second color. The authors prove:

For any tree T on n vertices with maximum degree m ,

$$r(K_{2,2}, T) = \max\{4, n + 1, r(K_{2,2}, K_{1,m})\};$$

$$r(K_{3,3}, T) \leq \max\{n + \lceil cn^{1/3} \rceil, r(K_{3,3}, K_{1,m})\},$$

for some constant c , and, except for the choice of c , this is best possible.

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05C55 Generalized Ramsey theory

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