论文

SOME RESULTS ON CIRCULAR PERFECT GRAPHS AND PERFECT GRAPHS

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摘要   An r-circular coloring of a graph G is a map f from $V(G)$ to the set of open unit intervals of an Euclidean circle of length r, such that $f(u)\cap f(v)=\emptyset$ whenever $uv\in E(G)$. Circular perfect graphs are defined analogously to perfect graphs by means of two parameters, the circular chromatic number and the circular clique number. In this paper, we study the properties of circular perfect graphs. We give (1) a necessary condition for a graph to be circular perfect, (2) some circular critical imperfect graphs, and (3) a characterization of graphs with the property that each of their induced subgraphs has circular clique number the same as its clique number, and then the two conjectures that are equivalent to the perfect graph conjecture.

关键词   Circular perfect, perfect, graph

分类号

Abstract An r-circular coloring of a graph G is a map f from $V(G)$ to the set of open unit intervals of an Euclidean circle of length r, such that $f(u)\cap f(v)=\emptyset$ whenever $uv\in E(G)$. Circular perfect graphs are defined analogously to perfect graphs by means of two parameters, the circular chromatic number and the circular clique number. In this paper, we study the properties of circular perfect graphs. We give (1) a necessary condition for a graph to be circular perfect, (2) some circular critical imperfect graphs, and (3) a characterization of graphs with the property that each of their induced subgraphs has circular clique number the same as its clique number, and then the two conjectures that are equivalent to the perfect graph conjecture.

Key words   Circular perfect   perfect   graph

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