

Short Communication Gallai graphs and Anti-Gallai Graphs

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The Gallai graph and therefore the anti-Gallai graph of a graph G have the perimeters of G as their vertices. 2 edges of G are adjacent within the Gallai graph of G if they're incident however don't span a triangle in G ; they're adjacent within the anti-Gallai graph of G if they span a triangle in G . during this paper we tend to show: The Four Color Theorem are often equivalently explicit in terms of anti-Gallai graphs; the issues of crucial the inner circle range, and therefore the chromatic range of a Gallai graph are NP-complete. moreover, we tend to discuss the relation of Gallai graphs to the speculation of excellent graphs. A characterization of Gallai graphs and anti-Gallai graphs is additionally given [1]. Many theorems elucidate the structure of objects in some category (2? By showing that each object in W are often rotten in a very such approach into such "primitive" objects in \mathcal{C} . one among the oldest and best well-known examples asserts that each finite commutative group may be a direct product of primitive cyclic groups; examples in combinatorics embody Seymour's decomposition of normal matroids [S], and Burlet and Fonlupt's decomposition of Meyniel graphs. the aim of this paper is to gift such a theorem for the category of claw-free excellent graphs, and to denote that the theory yields a polynomial-time rule for recognizing these graphs[2]. Claude Berge outlined a graph G to be excellent if, for every elicited subgraph F of G , the chromatic range of F equals the biggest range of pairwise adjacent vertices in F . a region of Berge's inspiration came from previous results on triangulated graphs, outlined as graphs containing no chordless cycles with a minimum of four vertices: Hajnal and Suranyi [S] proven that enhances of triangulated graphs are excellent, and Berge proven that triangulated graphs are excellent. we tend to shall decision a graph decrepit triangulated if it's no elicited subgraph similarity to a chordless cycle with live or additional

vertices, or to the complement of such a cycle. it's simple to examine that the chordless cycle with live vertices is similarity to its complement, which the complement of each chordless cycle with a minimum of six vertices contains a chordless cycle with four vertices; thus triangulated graphs are decrepit triangulated, and enhances of triangulated graphs are decrepit triangulated. Our main result states that decrepit triangulated graphs are excellent [3]. The graph theory-based leads to this paper are associated with the study of the subsequent question. Given associate a $n \times n$ positive definite matrix M that's distributed (many zero entries), that of the matrices $PMPT$ (P associate $n \times n$ permutation matrix) ought to we tend to use to unravel a system comparable to $maxwell = b$ by mathematician elimination ? Parter mentioned this question once M was pictured by a tree, associated he showed that an ordering, P , might be found that resulted in a very "perfect" elimination theme. Our results show {this is|this is often|this are often} true additional usually once M can be pictured by a triangulated graph. we tend to gift here solely the theoretical aspects of elimination and can gift elsewhere the applications of this analysis to the study of economical numerical resolution of distributed positive definite systems of equations.

REFEERENCES

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