Why

We characterize chordal graphs.[1]

Definition

Let (V, E) be an undirected graph. A set $S \subset V$ is a *vertex separator* for two vertices v, w (or a *vw-separator*) if v and w are disconnected in the subgraph induced by $V - S$. There always exists a vertex separator for two nonadjacent vertices.

A vertex separator is a *minimal vertex separator* for two vertices if no proper subset of it is a vertex separator for those vertices. Another term for vertex separator is *cutset*. Similarly, one for minimal vertex separator is *relatively minimal cutset*.

Example

For example, for the graph in Figure 1, $\{c, e\}$ is a minimal *ag*-separator and $\{b, c, e\}$ is a minimal *ad*-separator. A minimal vertex separator may contain another minimal vertex separator if they are minimal for different pairs of vertices.[2]

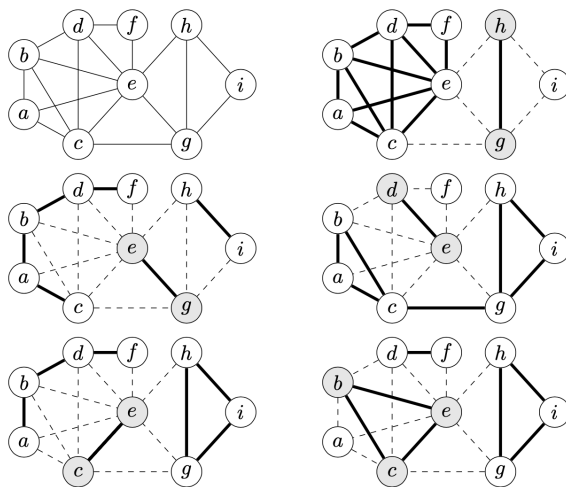[1]Future editions will expand.

[2]See Vandenberghe and Andersen, 2014.

Figure 1: A chordal graph and its five minimal cutsets.

Vertex Separators

Chordal Graphs

Integer Divisors

Trees

Undirected Subgraphs

Undirected Paths

Integral Line

Integer Arithmetic

Undirected Graphs

Lists

Natural Multiplicative Identity

Natural Additive Identity

Set Numbers

Direct Products

Arithmetic

Identity Elements

Finite Sets

Integer Products

Natural Powers

Equivalent Sets

Function Inverses

Family Unions and Intersections

Integer Sums

Natural Products

Operations

Function Composites

Function Images

Families

Integer Numbers

Natural Sums

Functions

Recursion Theorem

Natural Order

Equivalence Relations

Relations

Peano Axioms

Set Products

Natural Induction

Natural Numbers

Set Powers

Generalized Set Dualities

Set Symmetric Differences

Partitions

Intersection of Empty Set

Successor Sets

Unordered Triples

Set Dualities

Set Unions and Intersections

Set Complements

Set Intersections

Pair Unions

Ordered Pairs

Set Differences

Set Unions

Pair Intersections

Empty Set

Unordered Pairs

Set Specification

Geometry

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Identities

Sets

Names

Letters

Objects