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.

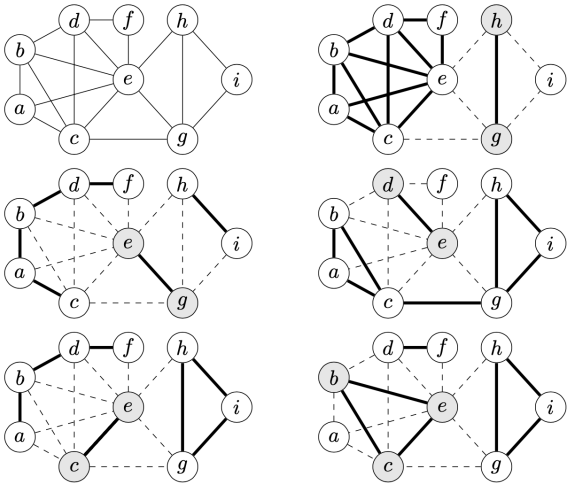
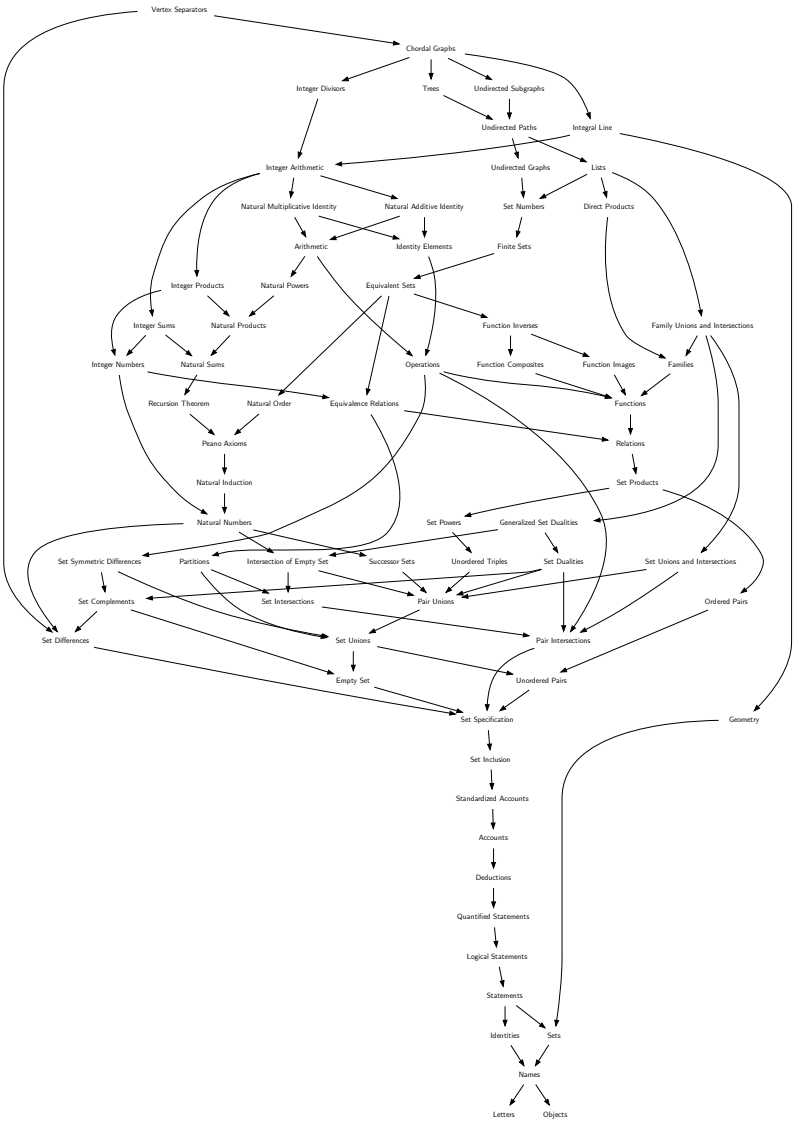


Figure 1: A chordal graph and its five minimal cutsets.


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
Integer Sums
Natural Products
Function Inverses
Family Unions and Intersections
Integer Numbers
Natural Sums
Operations
Function Composites
Function Images
Families
Recursion Theorem
Natural Order
Equivalence Relations
Functions
Peano Axioms
Relations
Natural Induction
Set Products
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