



# Vertex Separators

## 1 Why

TODO

## 2 Definition

A *vertex separator* for two vertices of an undirected graph is a subset of the vertices of the graph such that the two vertices are in different connected components of the subgraph induced by the complement of the subset of 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. Other names for minimal vertex separators are *relatively minimal cutsets*.

## 3 Result

**Proposition 1.** *A graph is chordal if and only if all minimal vertex separators are complete.*

*Proof.* TODO

□





