

Connectivity

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Outline

1 connectivity

Connectivity

Connected Graph

A graph G is connected if for each pair of vertices u and v in G there exists a path from u to v in G .

Maple commands : `IsConnected`, `ConnectedComponents`

Connectivity

Edge Connectivity

The edge connectivity of a graph, that is the minimum number of edges whose removal disconnects the graph.

Vertex Connectivity

The vertex connectivity of a graph, that is the minimum number of vertices whose removal disconnects the graph.

Maple commands : `EdgeConnectivity`, `VertexConnectivity`

Strongly Connected graph

In the mathematical theory of directed graphs, a graph is said to be strongly connected or disconnected if every vertex is reachable from every other vertex. The strongly connected components or disconnected components of an arbitrary directed graph form a partition into subgraphs that are themselves strongly connected.

Maple commands : `IsStronglyConnected`, `StronglyConnectedComponents`