Graph Terminology Overview

Algorithms & Datastructures

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walk	Weg	A series of connected vertices.
trail	kantendisjunkter Weg	A walk without repeated edges.
path	Pfad	A walk without repeated vertices.
cycle[1]	Kreis	A path where $v_0 = v_{end}$ holds.[2]
circuit, tour	kantendisjunkter Zyklus	A trail where $v_0 = v_{end}$ holds.
closed walk	Zyklus	A walk where $v_0 = v_{end}$ holds.
incident	inzident	connected (vertex & edge)
adjacent	adjazent	neighboring (vertex & vertex)
reachable	u erreicht v	$\exists$ walk from u to v
connected	zusammenhängend	G has one connected component
undirected	ungerichtet	all edges go both ways
acyclic	azyklisch	no cycles in G
degree	Grad	# of edges incident to v
indegree	Eingangsgrad	# of incoming edges incident to v
outdegree	Ausgangsgrad	# of outgoing edges incident to v
tree	Baum	connected graph without cycles
leaf	Blatt	vertex with degree 1
forest	Wald	graph where every ZHK is a tree
connected component	Zusammenhangskomponente	parts of a graph that are connected
neighborhood	Nachbarschaft	subgraph of all vertices adjacent to v
bridge, cut edge	Brücke	If e removed, G no longer connected
articulation point, cut vertex	Artikulationsknoten	If v removed, G no longer connected

[1] In some literature a cycle is also more generally equivalent to a circuit.
[2] This is not formally correct, since a path cannot have repeating vertices.