

## Graph Theory – Vocabulary List

adjacency matrix = connection matrix

approximate (*v.*, *adj.*)

- → approximation (*n.*) (of sth.)

bridge (= graph bridge)

centre of a graph

clique

colouring (= coloring *AmE*)

- edge c. → edge-coloured graph
- vertex c. → vertex-coloured graph
- chromatic number
- achromatic number

cut

cycle

- graph c.
- Hamiltonian c.
- Eulerian/Euler = E. circuit = E. tour

edge = arc (= line)

- directed
- separating
- subdivision of an edge
- edge set

endpoint

forest

graph

- simple g. × multigraph
- pseudograph
- directed → directedness (*n.*)  
× undirected
- oriented  
× non-oriented
- labelled (= labeled *AmE*)
  - edge-labelled
  - vertex-labelled
- connected  
× disconnected
  - k-connected g.
  - edge-connectivity
  - vertex-connectivity
  - totally disconnected = edgeless
- cyclic  
× acyclic
- k-partite graph
  - e.g. bipartite gr.
- complete g. → completeness (*n.*)
- planar  
× non-planar
- finite  
× infinite
- n-regular g.
- uniform g.

- homeomorphic graphs
- homomorphic graphs
- isomorphic graphs
- Eulerian g.
- graph order = order of a graph
- size of a g.
- null g. = empty g.

graph component

- strongly connected

incident (*adj.*)

- an edge is incident to its endpoints

intersection

- of graphs
- graph

in-degree

loop

- simple

matching

maximal subgraph for a particular property × minimal

maximum subgraph for a particular property

neighbour

subgraph

out-degree

path

- = Hamiltonian walk
- closed p. = cycle
- Hamiltonian path = H. line
- Eulerian p. = Euler walk = Euler chain = Euler trail = E. line

problem

- transport p.
- travelling-salesman p.
- four colour problem

simplex

spanning (*adj.*)

- subgraph
- tree
  - minimal spanning tree

trail

- closed = circuit

tree

vertex = node (= point)

- of a graph
- adjacent vertices
- even
- odd
- degree = the degree of a graph vertex
- articulation v. = cut-vertex = cutpoint
- terminal v.
- isolated

walk

- oriented