

**Answer on Question #80619 – Math – Discrete Mathematics
Question**

Define

(a) Graph; **(b)** Null graph; **(c)** Isolated vertex; **(d)** Pendant vertex;
(e) Pseudo-graph; **(f)** Directed graph; **(g)** Adjacent nodes; **(h)** Incident edges

Solution

(a) A graph is a structure amounting to a set of objects in which some pairs of the objects are in some sense "related".

(b) Null graph is a graph with zero or more vertices, but no edges.

(c) An isolated vertex is a vertex with degree zero; that is, a vertex that is not an endpoint of any edge.

(d) A vertex is said to be a pendant vertex if and only if it has degree 1. (end vertex)

(e) A pseudo-graph is a non-simple graph in which both graph loops and multiple edges are permitted.

(f) A directed graph is a graph that is a set of vertices connected by edges, where the edges have a direction associated with them.

(g) An adjacent vertex (node) of a vertex v in a graph is a vertex that is connected to v by an edge.

(h) Two edges are called incident, if they share a vertex.