- undirected graph, vertex or node, edge, adjancet vertices (neighbors), vertex is incident to an edge, edge is incident to a vertex, isolated vertex, pendant vertex
- simple graph $G(V, E)$ with $|V| = n$, $|E| = m$
- multigraph, pseudograph, (edge-)weighted graph, node-weighted graph
- subgraph of G, supergraph of G', spanning subgraph of G, induced subgraph $G[V']$ of G, induced cycle of G, union of graphs, graph decomposition
- complement(ary) graph $\overline{G}$ of G, complete graph K_n on n number of vertices, a (k-)clique of size k in G, regular graph, k-factor (k-regular spanning subgraph) of G, k-partite graph, bipartite graph, biclique (K_{n_1,n_2})
- minimum degree $\delta(G)$ of G, maximum degree $\Delta(G)$ of G, degree sequence, open neighborhood $N(v)$ of vertex v of G, closed neighborhood $N[v]$ of vertex v of G, open neighborhood $N(V')$ of G, closed neighborhood $N[V']$ of G
- popular graphs: triangle, cycle (C_n), wheel (W_{n-1}), house, kite, bowtie, hypercube (Q_n), claw, paw, Petersen
- planar graph, dual graph, dual vertex, dual edge

- u, v-walk; length of a u, v-walk; u, v-path; u, v-simple path
- distance between u and v, eccentricity $\epsilon(u)$ of u, diameter $diam(G)$ of G, diametral pair of nodes, raidus $rad(G)$ of G, a central node
- a cycle (containing u), a simple cylce (containing u), self-loop, girth of G
- a maximum path, a maximal path

- tree, rooted tree, forest
- root, a leaf, a non-leaf (a.k.a., an internal node)

- directed simple graph, orientation of edges, directed edges or arcs, in-degree $deg^-(v)$ of vertex v of G, out-degree $deg^+(v)$ of vertex v of G, arc-wighted directed simple graph, underlying undirected graph of G, (directed) cycle in a directed graph, directed acyclic graph, transpose (converse) of G, a tournament (of a complete undirected graph)