List of Symbols

Page	*Symbol*	*Meaning*
1	$\forall x$	For *all* x.
1	$\exists y$	There *exists* a y.
1	$x \epsilon X$	x is a *member* of X.
1	$A \subseteq X$	A is a *subset* of X.
1	$B \subset X$	B is a *proper subset* of X.
1	$\|X\|$	The *cardinality* of a set X.
1	$A \cap B$	The *intersection* of A and B.
1	$A \cup B$	The *union* of A and B.
2	$A + B$	The *union* of *disjoint* sets A and B.
2	$\varnothing$	The *empty set.*
2	$\mathscr{P}(X)$	The *power set* of X.
4	$V \times W$	The *Cartesian product* of sets V and W.
19	$S \between T$	Sets S and T *overlap*; $S \cap T \neq \varnothing$, $S \not\subseteq T$, and $T \not\subseteq S$.
3	$G = (V, E)$	The *graph* G with vertex set V and edge set E.
8	$G = (X_1, X_2, E)$	The *bipartite graph* G with vertex set $X_1 + X_2$ where each X_i is stable.
5	(V_S, S)	The subgraph *spanned* by a subset S of edges.
6	$G_A = (A, E_A)$	The subgraph *induced* by a subset A of vertices.
3	$\mathrm{Adj}(v)$	The *adjacency* set of vertex v.
6	$\mathrm{Adj}_A(v)$	The adjacency set restricted to A; $\mathrm{Adj}_A(v) = \mathrm{Adj}(v) \cap A$.
3	$N(v)$	The *neighborhood* of vertex V; $N(v) = \{v\} + \mathrm{Adj}(v)$.
7	$d^+(v)$	The *out-degree* of vertex v.
7	$d^-(v)$	The *in-degree* of vertex v.
7	$d(v)$	The *degree of vertex* v in an undirected graph.
4	E^{-1}	The *reversal* of a set E of edges.
4	$\hat{E}$	The *symmetric closure* of a set E of edges.
4	$\hat{ab}$	The *undirected edge* $\{ab\} \cup \{ba\}$.
7	$\|\|E\|\|$	In an undirected graph $G = (V,E)$ we define $\|\|E\|\| = \frac{1}{2}\|E\|$.
4	$\bar{G}$	The *complement* of an undirected graph G.
4	$G \cong G'$	Graphs G and G' are *isomorphic.*
6	$\omega(G)$	The *clique number* of G.
6	$k(G)$	The *clique cover number* of G.

6	$\alpha(G)$	The *stability number* of G.
7	$\chi(G)$	The *chromatic number* of G.
113	$t(G)$	The number of *transitive orientations* of G.
126	$r(G)$	The *rank* of the Γ^*-matroid of G.
220	$\theta(G)$	The *threshold dimension* of G.
203	$\chi(G;w)$	The *interval chromatic number* of a weighted graph $(G;w)$.
206	$\omega(G;w)$	The maximum *weighted clique number* of $(G;w)$.
9	K_n	The *complete graph* on n vertices.
9	C_n	The *chordless cycle* on n vertices.
9	P_n	The *chordless path graph* on n vertices.
9	$K_{m,n}$	The *complete bipartite graph* on $m+n$ vertices partitioned into an m-stable set and an n-stable set.
9	$K_{1,n}$	The *star graph* on $n+1$ vertices.
9	mK_n	m disjoint copies of K_n.
47	$G_1 \times G_2$	The *Cartesian product* of graphs G_1 and G_2.
77	$G \cdot H$	The *normal product* of graphs G and H.
109	$H_0[H_1, \ldots, H_n]$	The *composition* of graphs.
95	$\mathscr{G}$	The class of undirected graphs satisfying the property that every odd cycle of length greater than or equal to 5 has at least two chords.
105	Γ	The *forcing* relation on edges.
106	Γ^*	The reflexive, transitive closure of Γ.
106	$\mathscr{I}(G)$	The collection of *implication classes* of G.
106	$\hat{\mathscr{I}}(G)$	The collection of *color classes* of G.
135	$\mathscr{L}(P)$	The collection of *linear extensions* of a partial order P.
135	$\dim(P)$	The *dimension* of a partial order P.
157	$G[\pi]$	The *permutation graph* of π.
235	$H[\pi]$	The *stack sorting graph* of π.
157	π^{-1}	The *inverse* of the permutation π.
158	π^{ρ}	The *reversal* of the permutation π.
228	$\sqcup\!\sqcup$	The *shuffle product*.
236	$\mathscr{H}$	The class of *stack sorting graphs*.
23	$O(f(m))$	Computational complexity *on the order of* $f(m)$.
26	P	The class of *deterministic polynomial-time* problems.
27	NP	The class of *nondeterministic polynomial-time* problems.
27	$\Pi_1 \propto \Pi_2$	Problem Π_1 is *polynomially transformable* to problem Π_2.
32	Λ	The *null* or *undefined* symbol in an algorithm.
176	$T \equiv T'$	The PQ-trees T and T' are *equivalent*.
177	$\Pi(\mathscr{I})$	The collection of all permutations π of X such that the members of each subset $I \in \mathscr{I}$ occur consecutively in π where $\mathscr{I} \subseteq \mathscr{P}(X)$.
53	$G \circ \mathbf{h}$	The graph G *multiplied* by the vector $\mathbf{h}$.
62	$\mathbb{R}^n$	The n-dimensional vector space over the *real numbers*.
62	$P(\mathbf{A})$	The *polyhedron* of matrix $\mathbf{A}$.
62	$P_I(\mathbf{A})$	The *integral polyhedron* of matrix $\mathbf{A}$.
59	$\mathbf{1}$	The vector of all ones.
62	$\mathbf{0}$	The vector of all zeros.
60	$\mathbf{J}$	The matrix of all ones.
60	$\mathbf{I}$	The identity matrix.
256	$G(\mathbf{M})$	The graph of matrix $\mathbf{M}$.
256	$B(\mathbf{M})$	The bipartite graph of matrix $\mathbf{M}$.