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P: the class of problems that can be decided by deterministic Turing machines in polynomial time

P-Complete: the subclass of P problems to which all P problems reduce in logarithmic space.

NC: the class of problems that can be decided by circuits of polynomial number of gates and poly-logarithmic $O(\log^k n)$ depth

NL: the class of problems that can be decided by nondeterministic Turing machines in

logarithmic space

NL-Complete: the subclass of NL problems to which all NL problems reduce in logarithmic space.

L: the class of problems that can be decided by deterministic Turing machines in logarithmic space

In the following, $X \subset Y$ means X is a proper subset of Y , i.e., $X \subseteq Y$ but $X \neq Y$.

Proven Facts

$$L \subseteq NL \subseteq NC \subseteq P$$

Conjectures

$$L \subset NL \subset NC \subset P$$

$$L \cap \text{NL-Complete} = \emptyset$$

$$NC \cap \text{P-Complete} = \emptyset$$