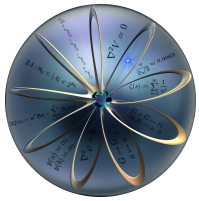

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logic

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Related topic	FuzzySubset
Defines	syntax
Defines	semantics
Defines	type
Defines	sort

Generally, by logic, people mean first order logic, a formal set of rules for building mathematical statements out of symbols like $\neg$ (negation) and $\rightarrow$ (implication) along with quantifiers like $\forall$ (for every) and $\exists$ (there exists).

More generally, a *logic* is any set of rules for forming sentences (the logic's *syntax*) together with rules for assigning truth values to them (the logic's *semantics*). Normally it includes a (possibly empty) set of *types* T (also called *sorts*), which represent the different kinds of objects that the theory discusses (typical examples might be sets, numbers, or sets of numbers). In addition it specifies particular quantifiers, connectives, and variables. Particular theories in the logic can then add relations and functions to fully specify a logical language.