



Math for the people, by the people.

sound, complete

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If Th and Pr are two sets of facts (in particular, a theory of some language and the set of things provable by some method) we say Pr is *sound* for Th if $Pr \subseteq Th$. Typically we have a theory and set of rules for constructing proofs, and we say the set of rules are sound (which theory is intended is usually clear from context) since everything they prove is true (in Th).

If $Th \subseteq Pr$ we say Pr is *complete* for Th . Again, we usually have a theory and a set of rules for constructing proofs, and say that the set of rules is complete since everything true (in Th) can be proven.