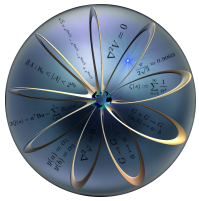

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Herbrand's theorem (first order logic)

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Let T be a first-order theory consisting of open formulas only. Then:

1. If T is satisfiable, it has a Herbrand model
2. If T is not satisfiable, there is a finite subset of the set of ground instances of formulas of T which is unsatisfiable.