

Re: incompleteness of first-order logic

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- *From:* Jan Burse <janburse@xxxxxxxxxxxx>
 - *Date:* Mon, 30 Jan 2006 14:34:28 +0100
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Jan Burse wrote:

M is a model. Let $\text{Th } M = \{p : M \models p\}$.
Show that $\text{Th } M$ is a complete theory, that is to say, $\text{Th } M \not\models p \Rightarrow \text{Th } M \models \text{not } p$.

Sorry, do you mean by p an arbitrary sentence.
Then it is true in the propositional case.
But false in the predicate logic case.

The reason is that in your univers U of M
you might have elements which might not
have terms in your language.

Thus for example it could be that $\text{Th } M \not\models$
forall $y R(c,y)$, and $\text{Th } M \not\models$ exists y
not $R(c,y)$.

Must think about such an M , let me see in a
next E-mail.

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