

-NoValue-

axd.1 Derivabilidade and the Quantifiers

fol:axd:qpr:
sec The completeness theorem also requires that axiomatic deductions yield the explanation facts about $\vdash$ established in this section.

fol:axd:qpr:
thm:strong-generalization **Teorema axd.1.** *If c is a **símbolo de constante** not occurring in Γ or $\varphi(x)$ and $\Gamma \vdash \varphi(c)$, then $\Gamma \vdash \forall x \varphi(x)$.*

Prova. By the deduction theorem, $\Gamma \vdash \top \rightarrow \varphi(c)$. Since c does not occur in Γ or $\top$, we get $\Gamma \vdash \top \rightarrow \forall x \varphi(x)$. By the deduction theorem again, $\Gamma \vdash \forall x \varphi(x)$. $\square$

fol:axd:qpr:
prop:provability-quantifiers

Proposição axd.2.

1. $\varphi(t) \vdash \exists x \varphi(x)$.
2. $\forall x \varphi(x) \vdash \varphi(t)$.

Prova. 1. By ?? and the deduction theorem.

2. By ?? and the deduction theorem. $\square$

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Referências Bibliográficas