

syn.1 Entailment

mod:syn:ent:
sec

Definition syn.1. If Γ is a set of formulas and φ a formula, then Γ entails φ —in symbols: $\Gamma \models \varphi$ —if and only if for every model $\mathfrak{M} = (W, R, V)$ and world $w \in W$, if $\mathfrak{M}, w \models \psi$ for every $\psi \in \Gamma$, then $\mathfrak{M}, w \models \varphi$. If Γ contains a single formula ψ , then we write $\psi \models \varphi$.

Problem syn.1. Show that $\Box(p \rightarrow q) \not\models p \rightarrow \Box q$ and $p \rightarrow \Box q \not\models \Box(p \rightarrow q)$.

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Bibliography