Axioms. All instances of the following schemata. v_i, v_j, and v_k can be any of the variables v_1, v_2, v_3,.... c and d are constants.

(K) $\square(\varphi \rightarrow \psi) \rightarrow (\square\varphi \rightarrow \square\psi)$
(◊Def) $\lozenge\, \varphi \leftrightarrow \sim \square \sim \varphi$
($\forall$Dist) $(\forall v_i)(\varphi \quad \psi) \supset ((\forall v_i)\varphi \supset (\forall v_i)\psi$
(RUS) $(\forall v_i)\varphi(v_i) \rightarrow ((\exists v_k)v_k = c \rightarrow \varphi(c))$
(Vac) $\varphi \leftrightarrow (\forall v_i)\varphi$, v_i not free in φ
(EE) $(\forall v_i)(\exists v_j)v_i = v_j$
($\exists$Def) $(\exists v_i)\varphi \leftrightarrow \sim (\forall v_i) \sim \varphi$.
(Ref=) $c = c$
(Sub=) $c = d \rightarrow (\varphi(c) \leftrightarrow \varphi(d))$
($\square\neq$) $\sim c = d \rightarrow \square \sim c = d$

Rules.

TC. You may write any tautology or any tautoogical consequence of things you've written earlier.

Nec. From φ, you may infer $\square\varphi$.

(UG) From $\varphi(c)$, you may infer $(\forall v_i)\varphi(v_i)$, provided c doesn't appear in $\varphi(v_i)$.

(UG^n) From $(\psi_1 \rightarrow \square(\psi_2 \rightarrow \square(\psi_3 \rightarrow \ldots \square(\psi_{n-1} \rightarrow \square\psi_n(c))\ldots)))$, you may infer $(\psi_1 \rightarrow \square(\psi_2 \rightarrow \square(\psi_3 \rightarrow \ldots \square(\psi_{n-1} \rightarrow \square(\forall v_i)\psi_n(v_i))\ldots)))$, provided c doesn't appear in any of the ψ_ks with $1 \leq k < n$ or in $\psi_n(v_i)$, and v_i occurs free in $\psi_n(v_i)$.