

t6_cqc_the2
(TMUpwbTDUbejsqDtbKJLZjKYq4CzSnokN5S)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k24_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ & X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k2_qc_lang1 X0) (k3_qc_lang1 \\ & X0)) \Rightarrow (\forall X3.(m2_subset_1 X3 (k2_qc_lang1 X0) (k3_qc_lang1 \\ & X0)) \Rightarrow ((X2 \in k24_qc_lang1 X0 (k15_qc_lang1 X0 X3 X1)) \Leftrightarrow ((X2 \in k24_qc_lang1 \\ & X0 X1) \wedge (X2 \neq X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k2_qc_lang1 \\ & X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 \\ & X0)) \Rightarrow (k24_qc_lang1 X0 (k5_qc_lang2 X0 X1 X2) = k7_subset_1 (k3_qc_lang1 \\ & X0) (k24_qc_lang1 X0 X2) (k1_tarski X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k2_qc_lang1 \\ & X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 \\ & X0)) \Rightarrow (k24_qc_lang1 X0 (k15_qc_lang1 X0 X1 X2) = k7_subset_1 (k3_qc_lang1 \\ & X0) (k24_qc_lang1 X0 X2) (k1_tarski X1)))) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ & X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k2_qc_lang1 X0) (k3_qc_lang1 \\ & X0)) \Rightarrow (\forall X3.(m2_subset_1 X3 (k2_qc_lang1 X0) (k3_qc_lang1 \\ & X0)) \Rightarrow ((X2 \in k24_qc_lang1 X0 (k5_qc_lang2 X0 X3 X1)) \Leftrightarrow ((X2 \in k24_qc_lang1 \\ & X0 X1) \wedge (X2 \neq X3)))))) \end{aligned}$$