

t37_qc_lang2
(TMLz9aqNSCNRtnGvQv5g3KrfUCwsFfFFQS4)

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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 $v1_qc_lang2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow ((k10_qc_lang2 \\ & X0 (k3_qc_lang2 X0 X1 X2) = X1) \wedge ((k11_qc_lang2 X0 (k3_qc_lang2 X0 \\ & X1 X2) = X2) \wedge (k18_qc_lang1 X0 (k3_qc_lang2 X0 X1 X2) = k14_qc_lang1 \\ & X0 (k13_qc_lang1 X0 X1) (k13_qc_lang1 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ & X0)) \Rightarrow ((v1_qc_lang2 X1 X0) \Leftrightarrow (\exists X2.(m1_subset_1 X2 (k9_qc_lang1 \\ & X0)) \wedge (\exists X3.(m1_subset_1 X3 (k9_qc_lang1 X0)) \wedge (X1 = k3_qc_lang2 \\ & X0 X2 X3)))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ & X0)) \Rightarrow ((v1_qc_lang2 X1 X0) \Rightarrow (X1 = k3_qc_lang2 X0 (k10_qc_lang2 X0 \\ & X1) (k11_qc_lang2 X0 X1)))) \end{aligned}$$