

t29_qc_lang2
(TMJNPjrcjXkeDAkpYsjaaT2ZErCP2pmKrvU)

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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 $k10_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Let $k19_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow ((k19_qc_lang1 \\ X0 (k14_qc_lang1 X0 X1 X2) = X1) \wedge (k20_qc_lang1 X0 (k14_qc_lang1 \\ X0 X1 X2) = X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow (k18_qc_lang1 X0 (k13_qc_lang1 X0 X1) = X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0) \wedge ((m1_subset_1 \\ X1 (k9_qc_lang1 X0)) \wedge (m1_subset_1 X2 (k9_qc_lang1 X0)))) \Rightarrow (m1_subset_1 \\ (k14_qc_lang1 X0 X1 X2) (k9_qc_lang1 X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k9_qc_lang1 \\ X0))) \Rightarrow (m1_subset_1 (k13_qc_lang1 X0 X1) (k9_qc_lang1 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow (k3_qc_lang2 \\ X0 X1 X2 = k13_qc_lang1 X0 (k14_qc_lang1 X0 (k13_qc_lang1 X0 X1) (\\ k13_qc_lang1 X0 X2)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ X0)) \Rightarrow (k11_qc_lang2\ X0\ X1 = k18_qc_lang1\ X0\ (k20_qc_lang1\ X0\ (k18_qc_lang1 \\ X0\ X1)))) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ X0)) \Rightarrow (k10_qc_lang2\ X0\ X1 = k18_qc_lang1\ X0\ (k19_qc_lang1\ X0\ (k18_qc_lang1 \\ X0\ X1)))) \end{aligned} \tag{7}$$

Theorem 1

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