

t13_qc_lang3
(TMPRUEzt8WvZwtpaRZ93Xnsszy2fSGh1PXs)

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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 $k24_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ 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 $v4_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_qc_lang2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow ((v4_qc_lang1 X1 X0) \Rightarrow (k24_qc_lang1 X0 X1 = k4_subset_1 (k3_qc_lang1 \\ X0) (k24_qc_lang1 X0 (k19_qc_lang1 X0 X1)) (k24_qc_lang1 X0 (k20_qc_lang1 \\ X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow ((v3_qc_lang1 X1 X0) \Rightarrow (k24_qc_lang1 X0 X1 = k24_qc_lang1 X0 \\ (k18_qc_lang1 X0 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow ((v1_qc_lang2 X1 X0) \Rightarrow ((v2_qc_lang2 X1 X0) \wedge ((v3_qc_lang1 \\ X1 X0) \wedge ((v4_qc_lang1 (k18_qc_lang1 X0 X1) X0) \wedge ((v3_qc_lang1 (\\ k19_qc_lang1 X0 (k18_qc_lang1 X0 X1)) X0) \wedge (v3_qc_lang1 (k20_qc_lang1 \\ X0 (k18_qc_lang1 X0 X1)) X0)))))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k9_qc_lang1 X0))) \Rightarrow (m1_subset_1 (k20_qc_lang1 X0 X1) (k9_qc_lang1 X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k9_qc_lang1 X0))) \Rightarrow (m1_subset_1 (k19_qc_lang1 X0 X1) (k9_qc_lang1 X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1\ X0)\wedge(m1_subset_1\ X1\ (k9_qc_lang1\ X0)))\Rightarrow(m1_subset_1\ (k18_qc_lang1\ X0\ X1)\ (k9_qc_lang1\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1\ X0))\Rightarrow(k11_qc_lang2\ X0\ X1 = k18_qc_lang1\ X0\ (k20_qc_lang1\ X0\ (k18_qc_lang1\ X0\ X1)))) \quad (7)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1\ X0))\Rightarrow(k10_qc_lang2\ X0\ X1 = k18_qc_lang1\ X0\ (k19_qc_lang1\ X0\ (k18_qc_lang1\ X0\ X1)))) \quad (8)$$

Theorem 1

$$\forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1\ X0))\Rightarrow((v1_qc_lang2\ X1\ X0)\Rightarrow(k24_qc_lang1\ X0\ X1 = k4_subset_1\ (k3_qc_lang1\ X0)\ (k24_qc_lang1\ X0\ (k10_qc_lang2\ X0\ X1))\ (k24_qc_lang1\ X0\ (k11_qc_lang2\ X0\ X1))))))$$