

t11_qc_lang4
(TMLnQFXZtg69qLxsxmj18R9eUYiNzfPo5oG)

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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 $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_qc_lang4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v3_trees_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (\forall X2. (X2 \in k10_xtuple_0 X1) \Rightarrow (X2 \in X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow ((X1 \in k10_xtuple_0 \\ (k2_qc_lang4 X0 X2)) \Leftrightarrow (r2_qc_lang2 X0 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow ((v1_relat_1 (k2_qc_lang4 X0 X1)) \wedge ((v5_relat_1 (k2_qc_lang4 \\ X0 X1) (k9_qc_lang1 X0)) \wedge ((v1_funct_1 (k2_qc_lang4 X0 X1)) \wedge ((\\ v1_finset_1 (k2_qc_lang4 X0 X1)) \wedge (v3_trees_2 (k2_qc_lang4 X0 \\ X1))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow (\forall X2. (X2 = k15_qc_lang2 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow \\ (\exists X4. (m1_subset_1 X4 (k9_qc_lang1 X0)) \wedge ((X4 = X3) \wedge (r2_qc_lang2 \\ X0 X4 X1)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 X0)) \Rightarrow (k10_xtuple_0 (k2_qc_lang4 X0 X1) = k15_qc_lang2 X0 X1))$$