

t8_qc_lang1 (TMcdbLn- MHmy83yxgcSwVqHHKe2SmZwdarjL)

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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 $k5_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k8_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k10_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k12_finseq_1 X0 X1 = k5_finseq_1 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k5_numbers) \wedge (m1_qc_lang1 X1)) \Rightarrow (\neg v1_xboole_0 (k8_qc_lang1 X1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 \\ X2 X0 X1)\Rightarrow(m1_subset_1 X2 X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(\\ (v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_qc_lang1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow \\ (m1_subset_1 (k8_qc_lang1 X0 X1) (k1_zfmisc_1 (k6_qc_lang1 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 k5_numbers)\Rightarrow \\ (k8_qc_lang1 X0 X1 = ReplSep (toset (\lambda X2 : \iota.m1_subset_1 X2 \\ (k6_qc_lang1 X0))) (\lambda X2 : \iota.k7_qc_lang1 X0 X2 = X1) (\lambda X2 : \\ \iota.X2)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(v3_card_1 X1 X0)\Leftrightarrow(k1_card_1 X1 = X0) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k6_qc_lang1 \\ X0))\Rightarrow(\forall X2.(m2_finseq_1 X2 (k2_qc_lang1 X0))\Rightarrow((k7_qc_lang1 \\ X0 X1 = k3_finseq_1 X2)\Rightarrow(k10_qc_lang1 X0 X1 X2 = k7_finseq_1 (k12_finseq_1 \\ (k6_qc_lang1 X0) X1) X2)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ X0))\Rightarrow(v1_relat_1 X1)) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ X0))\Rightarrow(v1_xboole_0 X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 k5_numbers)\Rightarrow \\ (\forall X2.(m2_subset_1 X2 (k6_qc_lang1 X0) (k8_qc_lang1 X0 X1))\Rightarrow \\ (\forall X3.((v3_card_1 X3 X1)\wedge(m2_finseq_1 X3 (k2_qc_lang1 X0))\Rightarrow \\ (k10_qc_lang1 X0 X2 X3 = k7_finseq_1 (k12_finseq_1 (k8_qc_lang1 \\ X0 X1) X2) X3)))))) \end{aligned}$$