

t9_qc_lang1

(TMGkktNAtEipfBVUdwmoNsortR6JJNfmNpu)

October 27, 2020

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 $k12_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $v2_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k13_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k15_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0 : \iota \Rightarrow o. \forall X1. ((\forall X2. (m1_subset_1 X2 \\
& k5_numbers) \Rightarrow (\forall X3. (m2_subset_1 X3 (k6_qc_lang1 X1) (k8_qc_lang1 \\
& X1 X2)) \Rightarrow (\forall X4. ((v3_card_1 X4 X2) \wedge (m2_finseq_1 X4 (k2_qc_lang1 \\
& X1)))) \Rightarrow (X0 (k10_qc_lang1 X1 X3 X4)))) \wedge ((X0 (k12_qc_lang1 X1)) \wedge \\
& ((\forall X2. (m1_subset_1 X2 (k9_qc_lang1 X1)) \Rightarrow ((X0 X2) \Rightarrow (X0 (\\
& k13_qc_lang1 X1 X2)))) \wedge ((\forall X2. (m1_subset_1 X2 (k9_qc_lang1 \\
& X1)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k9_qc_lang1 X1)) \Rightarrow (((X0 X2) \wedge \\
& (X0 X3)) \Rightarrow (X0 (k14_qc_lang1 X1 X2 X3)))) \wedge (\forall X2. (m2_subset_1 \\
& X2 (k2_qc_lang1 X1) (k3_qc_lang1 X1)) \Rightarrow (\forall X3. (m1_subset_1 \\
& X3 (k9_qc_lang1 X1)) \Rightarrow ((X0 X3) \Rightarrow (X0 (k15_qc_lang1 X1 X2 X3)))))) \Rightarrow \\
& (\forall X2. (m1_subset_1 X2 (k9_qc_lang1 X1)) \Rightarrow (X0 X2))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(m1_qc_lang1 X1))\Rightarrow(\neg v1_xboole_0 (k8_qc_lang1 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k6_qc_lang1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k3_qc_lang1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k2_qc_lang1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Rightarrow(m1_subset_1 X2 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(m1_subset_1 (k8_qc_lang1 X0 X1) (k1_zfmisc_1 (k6_qc_lang1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(m1_subset_1 (k3_qc_lang1 X0) (k1_zfmisc_1 (k2_qc_lang1 X0))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0)\wedge((m1_subset_1 X1 (k3_qc_lang1 X0))\wedge(m1_subset_1 X2 (k9_qc_lang1 X0))))\Rightarrow(m1_subset_1 (k15_qc_lang1 X0 X1 X2) (k9_qc_lang1 X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0)\wedge((m1_subset_1 X1 (k9_qc_lang1 X0))\wedge(m1_subset_1 X2 (k9_qc_lang1 X0))))\Rightarrow(m1_subset_1 (k14_qc_lang1 X0 X1 X2) (k9_qc_lang1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0)\wedge(m1_subset_1 X1 (k9_qc_lang1 X0)))\Rightarrow(m1_subset_1 (k13_qc_lang1 X0 X1) (k9_qc_lang1 X0)) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_qc_lang1\ X0)\wedge((m1_subset_1 \\ X1\ (k6_qc_lang1\ X0))\wedge(m1_finseq_1\ X2\ (k2_qc_lang1\ X0))))\Rightarrow(m1_subset_1 \\ (k10_qc_lang1\ X0\ X1\ X2)\ (k9_qc_lang1\ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ X0))\Rightarrow((v5_qc_lang1\ X1\ X0)\Leftrightarrow(\exists X2.(m2_subset_1\ X2\ (k2_qc_lang1 \\ X0)\ (k3_qc_lang1\ X0))\wedge(\exists X3.(m1_subset_1\ X3\ (k9_qc_lang1 \\ X0))\wedge(X1 = k15_qc_lang1\ X0\ X2\ X3)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ X0))\Rightarrow((v4_qc_lang1\ X1\ X0)\Leftrightarrow(\exists X2.(m1_subset_1\ X2\ (k9_qc_lang1 \\ X0))\wedge(\exists X3.(m1_subset_1\ X3\ (k9_qc_lang1\ X0))\wedge(X1 = k14_qc_lang1 \\ X0\ X2\ X3)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ X0))\Rightarrow((v3_qc_lang1\ X1\ X0)\Leftrightarrow(\exists X2.(m1_subset_1\ X2\ (k9_qc_lang1 \\ X0))\wedge(X1 = k13_qc_lang1\ X0\ X2)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ X0))\Rightarrow((v2_qc_lang1\ X1\ X0)\Leftrightarrow(\exists X2.(m1_subset_1\ X2\ k5_numbers)\wedge \\ (\exists X3.(m2_subset_1\ X3\ (k6_qc_lang1\ X0)\ (k8_qc_lang1\ X0\ X2))\wedge \\ (\exists X4.((v3_card_1\ X4\ X2)\wedge(m2_finseq_1\ X4\ (k2_qc_lang1\ X0))\wedge \\ (X1 = k10_qc_lang1\ X0\ X3\ X4)))))) \end{aligned} \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ X0))\Rightarrow(\neg(X1\neq k12_qc_lang1\ X0)\wedge(\neg v2_qc_lang1\ X1\ X0)\wedge(\neg v3_qc_lang1 \\ X1\ X0)\wedge(\neg v4_qc_lang1\ X1\ X0)\wedge(\neg v5_qc_lang1\ X1\ X0)))))) \end{aligned}$$