

t57_qc_lang3

(TMMhUFPyrjTxDG84H8rniu9Geka9EeKuJwn)

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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 $k5_qc_lang3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k4_qc_lang3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow (\forall X3. \\ & \quad ((\neg v1_xboole_0 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_qc_lang1 \\ & \quad X0)))) \Rightarrow (k4_qc_lang3 X0 X3 (k14_qc_lang1 X0 X1 X2) = k4_subset_1 \\ & \quad X3 (k4_qc_lang3 X0 X3 X1) (k4_qc_lang3 X0 X3 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\neg v1_xboole_0 (k5_qc_lang1 X0)) \quad (2)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (m1_subset_1 (k5_qc_lang1 X0) (k1_zfmisc_1 (k2_qc_lang1 X0))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0) \wedge ((m1_subset_1 \\ & \quad X1 (k9_qc_lang1 X0)) \wedge (m1_subset_1 X2 (k9_qc_lang1 X0)))) \Rightarrow (m1_subset_1 \\ & \quad (k14_qc_lang1 X0 X1 X2) (k9_qc_lang1 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 X0)) \Rightarrow (k5_qc_lang3 X0 X1 = k4_qc_lang3 X0 (k5_qc_lang1 X0) X1)) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k9_qc_lang1 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k9_qc_lang1\ X0)) \Rightarrow (k5_qc_lang3 \\ & X0\ (k14_qc_lang1\ X0\ X1\ X2) = k4_subset_1\ (k5_qc_lang1\ X0)\ (k5_qc_lang3 \\ & X0\ X1)\ (k5_qc_lang3\ X0\ X2)))) \end{aligned}$$