

t56_procal_1
(TMaZBafe6n4rSvHpSCCoxayRgBTUtqNzSpy)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_cqc_lang : \iota \Rightarrow \iota$ be given. Let $k8_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_cqc_the1 : \iota \Rightarrow \iota$ be given. Let $k7_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X3.(m2_subset_1\ X3\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow ((k8_cqc_lang\ X0\ X1\ X2 \in k4_cqc_the1\ X0) \Rightarrow \\ (k8_cqc_lang\ X0\ (k7_cqc_lang\ X0\ X1\ X3)\ (k7_cqc_lang\ X0\ X2\ X3) \in k4_cqc_the1 \\ X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X3.(m2_subset_1\ X3\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (((k8_cqc_lang\ X0\ X1\ X2 \in k4_cqc_the1\ X0) \wedge \\ (k8_cqc_lang\ X0\ X2\ X3 \in k4_cqc_the1\ X0)) \Rightarrow (k8_cqc_lang\ X0\ X1\ X3 \in k4_cqc_the1 \\ X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0\ X0) \wedge ((\neg v1_xboole_0\ X1) \wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2\ X0\ X1) \Leftrightarrow (m1_subset_1\ X2\ X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow & (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ & X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1 \\ & X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X3.(m2_subset_1\ X3\ (k9_qc_lang1 \\ & X0)\ (k3_cqc_lang\ X0)) \Rightarrow ((k8_cqc_lang\ X0\ X1\ X2 \in k4_cqc_the1\ X0) \Rightarrow \\ & (k8_cqc_lang\ X0\ (k7_cqc_lang\ X0\ X3\ X1)\ (k7_cqc_lang\ X0\ X3\ X2) \in k4_cqc_the1 \\ & X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\neg v1_xboole_0\ (k3_cqc_lang\ X0)) \quad (5)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\neg v1_xboole_0\ (k9_qc_lang1\ X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_qc_lang1\ X0) \wedge ((m1_subset_1 \\ X1\ (k3_cqc_lang\ X0)) \wedge (m1_subset_1\ X2\ (k3_cqc_lang\ X0)))) \Rightarrow (m2_subset_1 \\ (k7_cqc_lang\ X0\ X1\ X2)\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (m1_subset_1\ (k3_cqc_lang\ X0)\ (k1_zfmisc_1\ (k9_qc_lang1\ X0))) \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow & (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ & X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1 \\ & X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X3.(m2_subset_1\ X3\ (k9_qc_lang1 \\ & X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X4.(m2_subset_1\ X4\ (k9_qc_lang1 \\ & X0)\ (k3_cqc_lang\ X0)) \Rightarrow (((k8_cqc_lang\ X0\ X1\ X2 \in k4_cqc_the1\ X0) \wedge \\ & (k8_cqc_lang\ X0\ X3\ X4 \in k4_cqc_the1\ X0)) \Rightarrow (k8_cqc_lang\ X0\ (k7_cqc_lang \\ & X0\ X1\ X3)\ (k7_cqc_lang\ X0\ X2\ X4) \in k4_cqc_the1\ X0)))))) \end{aligned}$$