

l9_cqc_the2

(TMcF8Qa6KuHacdGsPWPaepS74AUP8UcGqsr)

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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 $k9_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_cqc_lang : \iota \Rightarrow \iota$ be given. Let $v2_cqc_the1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow & (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & (\forall X3.(m2_subset_1 X3 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & (((v2_cqc_the1 (k8_cqc_lang X0 X1 X2) X0) \wedge \\ (v2_cqc_the1 (k8_cqc_lang X0 X2 X3) X0)) \Rightarrow & (v2_cqc_the1 (k8_cqc_lang \\ X0 X1 X3) X0)))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow & (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & (\forall X3.(m2_subset_1 X3 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & (((v2_cqc_the1 (k8_cqc_lang X0 X1 X2) X0) \wedge \\ (v2_cqc_the1 (k8_cqc_lang X0 X1 X3) X0)) \Rightarrow & (v2_cqc_the1 (k8_cqc_lang \\ X0 X1 (k7_cqc_lang X0 X2 X3) X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow & (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow & ((v2_cqc_the1 (k8_cqc_lang X0 (k7_cqc_lang \\ X0 X1 X2) X1) X0) \wedge & (v2_cqc_the1 (k8_cqc_lang X0 (k7_cqc_lang X0 X1 \\ X2) X2) X0)))) \end{aligned} \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_qc_lang1\ X0)\wedge((m1_subset_1 \\ X1\ (k3_cqc_lang\ X0))\wedge(m1_subset_1\ X2\ (k3_cqc_lang\ X0))))\Rightarrow(m2_subset_1 \\ (k7_cqc_lang\ X0\ X1\ X2)\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0)\Rightarrow(m1_subset_1\ (k3_cqc_lang\ X0)\ (k1_zfmisc_1 \\ (k9_qc_lang1\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ X0))\Rightarrow(v1_xboole_0\ X1)) \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0)\Rightarrow(\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0))\Rightarrow(\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0))\Rightarrow(\forall X3.(m2_subset_1\ X3\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0))\Rightarrow(\forall X4.(m2_subset_1\ X4\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0))\Rightarrow(((v2_cqc_the1\ (k8_cqc_lang\ X0\ X1\ X2)\ X0)\wedge \\ (v2_cqc_the1\ (k8_cqc_lang\ X0\ X3\ X4)\ X0))\Rightarrow(v2_cqc_the1\ (k8_cqc_lang \\ X0\ (k7_cqc_lang\ X0\ X1\ X3)\ (k7_cqc_lang\ X0\ X2\ X4))\ X0)))))) \end{aligned}$$