

t51_cqc_the2

(TMSjter2ZbHaNG7dnREzGwwSBxQevLEtyyp)

October 27, 2020

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 $k2_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ 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 $k6_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow ((v2_cqc_the1 (k8_cqc_lang X0 (k6_cqc_lang \\ X0 X1) X2) X0) \Rightarrow (v2_cqc_the1 (k8_cqc_lang X0 (k6_cqc_lang X0 X2) \\ X1) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow ((v2_cqc_the1 (k8_cqc_lang X0 X1 (k6_cqc_lang \\ X0 X2)) X0) \Rightarrow (v2_cqc_the1 (k8_cqc_lang X0 X2 (k6_cqc_lang X0 X1) \\ X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k2_qc_lang1 \\ X0) (k3_qc_lang1 X0)) \Rightarrow ((v2_cqc_the1 (k8_cqc_lang X0 (k6_cqc_lang \\ X0 (k12_cqc_lang X0 X2 (k6_cqc_lang X0 X1)))) (k11_cqc_lang X0 X2 \\ X1)) X0) \wedge (v2_cqc_the1 (k8_cqc_lang X0 (k11_cqc_lang X0 X2 X1) (\\ k6_cqc_lang X0 (k12_cqc_lang X0 X2 (k6_cqc_lang X0 X1)))) X0)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k3_qc_lang1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k3_cqc_lang X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0)\wedge(m1_subset_1 X1 (k3_cqc_lang X0)))\Rightarrow(m2_subset_1 (k6_cqc_lang X0 X1) (k9_qc_lang1 X0) (k3_cqc_lang X0)) \quad (7)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(m1_subset_1 (k3_qc_lang1 X0) (k1_zfmisc_1 (k2_qc_lang1 X0))) \quad (8)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(m1_subset_1 (k3_cqc_lang X0) (k1_zfmisc_1 (k9_qc_lang1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0)\wedge((m1_subset_1 X1 (k3_qc_lang1 X0))\wedge(m1_subset_1 X2 (k3_cqc_lang X0))))\Rightarrow(m2_subset_1 (k12_cqc_lang X0 X1 X2) (k9_qc_lang1 X0) (k3_cqc_lang X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0)\wedge((m1_subset_1 X1 (k3_qc_lang1 X0))\wedge(m1_subset_1 X2 (k3_cqc_lang X0))))\Rightarrow(m2_subset_1 (k11_cqc_lang X0 X1 X2) (k9_qc_lang1 X0) (k3_cqc_lang X0)) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ & \quad X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k2_qc_lang1 \\ & \quad X0)\ (k3_qc_lang1\ X0)) \Rightarrow ((v2_cqc_the1\ (k8_cqc_lang\ X0\ (k6_cqc_lang \\ & \quad X0\ (k11_cqc_lang\ X0\ X2\ X1))\ (k12_cqc_lang\ X0\ X2\ (k6_cqc_lang\ X0\ X1))) \\ & \quad X0) \wedge (v2_cqc_the1\ (k8_cqc_lang\ X0\ (k12_cqc_lang\ X0\ X2\ (k6_cqc_lang \\ & \quad X0\ X1))\ (k6_cqc_lang\ X0\ (k11_cqc_lang\ X0\ X2\ X1)))\ X0)))) \end{aligned}$$