

t15_cqc_lang
(TMaEV2P4c2Z4pZn1kpaVhRerYXQk8Zentfm)

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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 $k2_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k13_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_cqc_lang : \iota \Rightarrow \iota$ 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. Let $k12_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_qc_lang3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v3_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k22_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (k5_cqc_lang X0 = k12_qc_lang1 X0) \quad (2)$$

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\neg v1_xboole_0 (k3_qc_lang1 X0)) \quad (3)$$

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\neg v1_xboole_0 (k2_qc_lang1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (m1_subset_1 (k3_qc_lang1 X0) (k1_zfmisc_1 (k2_qc_lang1 X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0) \wedge ((m1_subset_1 X1 (k9_qc_lang1 X0)) \wedge (m1_subset_1 X2 (k3_qc_lang1 X0)))) \Rightarrow (m1_subset_1 (k13_cqc_lang X0 X1 X2) (k9_qc_lang1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (m1_subset_1 (k12_qc_lang1 X0) (k9_qc_lang1 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow & (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k2_qc_lang1 X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k9_qc_lang1 X0)) \Rightarrow ((X3 = k13_cqc_lang X0 X1 X2) \Leftrightarrow (\exists X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (k9_qc_lang1 X0) (k9_qc_lang1 X0)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k9_qc_lang1 X0) (k9_qc_lang1 X0)))))) \wedge ((X3 = k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 X1) \wedge (\forall X5.(m1_subset_1 X5 (k9_qc_lang1 X0)) \Rightarrow ((k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 (k5_cqc_lang X0) = k5_cqc_lang X0) \wedge ((v2_qc_lang1 X5 X0) \Rightarrow (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 X5 = k10_qc_lang1 X0 (k16_qc_lang1 X0 X5) (k1_cqc_lang X0 (k17_qc_lang1 X0 X5) (k2_cqc_lang X0 (k3_qc_lang3 X0 k6_numbers) X2)))))) \wedge ((v3_qc_lang1 X5 X0) \Rightarrow (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 X5 = k13_qc_lang1 X0 (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 (k18_qc_lang1 X0 X5)))))) \wedge ((v4_qc_lang1 X5 X0) \Rightarrow (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 X5 = k14_qc_lang1 X0 (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 (k19_qc_lang1 X0 X5)) (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 (k20_qc_lang1 X0 X5)))))) \wedge ((v5_qc_lang1 X5 X0) \Rightarrow (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 X5 = k15_funcop_1 (k9_qc_lang1 X0) (k21_qc_lang1 X0 X5) X2 X5 (k15_qc_lang1 X0 (k21_qc_lang1 X0 X5) (k3_funct_2 (k9_qc_lang1 X0) (k9_qc_lang1 X0) X4 (k22_qc_lang1 X0 X5)))))))))) \end{aligned} \quad (8)$$

Theorem 1

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k2_qc_lang1 X0) (k3_qc_lang1 X0)) \Rightarrow (k13_cqc_lang X0 (k5_cqc_lang X0) X1 = k5_cqc_lang X0))$$