

t19_cqc_lang (TMYjPdmBkh- pfLH5HYDMmeJA2zj9kPcaSv1q)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k13_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k2_qc_lang1 \\ X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 \\ X0)) \Rightarrow ((v3_qc_lang1 X2 X0) \Rightarrow (k13_cqc_lang X0 X2 X1 = k13_qc_lang1 \\ X0 (k13_cqc_lang X0 (k18_qc_lang1 X0 X2) X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k9_qc_lang1 X0))) \Rightarrow (m1_subset_1 (k13_qc_lang1 X0 X1) (k9_qc_lang1 X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow ((v3_qc_lang1 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 \\ X0)) \Rightarrow ((X2 = k18_qc_lang1 X0 X1) \Leftrightarrow (X1 = k13_qc_lang1 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow ((v3_qc_lang1 X1 X0) \Leftrightarrow (\exists X2.(m1_subset_1 X2 (k9_qc_lang1 \\ X0)) \wedge (X1 = k13_qc_lang1 X0 X2)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k2_qc_lang1 \\ X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 \\ X0)) \Rightarrow (k13_cqc_lang X0 (k13_qc_lang1 X0 X2) X1 = k13_qc_lang1 X0 \\ (k13_cqc_lang X0 X2 X1)))))) \end{aligned}$$