

t5_cqc_the2
(TMTZjmqzUmS2m4cMwAZLXeBaXWorN92jkJn)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ 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 $k24_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X0 \in k4_xboole_0 X1 (k1_tarski X2)) \Leftrightarrow ((X0 \in X1) \wedge (X0 \neq X2)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m2_subset_1 X1 (k2_qc_lang1 \\ X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k9_qc_lang1 \\ X0)) \Rightarrow (k24_qc_lang1 X0 (k15_qc_lang1 X0 X1 X2) = k7_subset_1 (k3_qc_lang1 \\ X0) (k24_qc_lang1 X0 X2) (k1_tarski X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k9_qc_lang1 X0))) \Rightarrow (m1_subset_1 (k24_qc_lang1 X0 X1) (k1_zfmisc_1 (k3_qc_lang1 X0))) \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 \\ X0)) \Rightarrow (\forall X2. (m2_subset_1 X2 (k2_qc_lang1 X0) (k3_qc_lang1 \\ X0)) \Rightarrow (\forall X3. (m2_subset_1 X3 (k2_qc_lang1 X0) (k3_qc_lang1 \\ X0)) \Rightarrow ((X2 \in k24_qc_lang1 X0 (k15_qc_lang1 X0 X3 X1)) \Leftrightarrow ((X2 \in k24_qc_lang1 \\ X0 X1) \wedge (X2 \neq X3)))))) \end{aligned}$$