

t33_qc_lang3
(TMVuttRP4Mur3N5r2yP3iS2Pk8C8FrhFVvH)

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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 $k4_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_5 : \iota$ be given. Let $k1_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $np_4 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 = k4_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\neg v1_xboole_0 (k4_qc_lang1 X0)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (m1_subset_1 (k4_qc_lang1 X0) (k1_zfmisc_1 (k2_qc_lang1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (m1_subset_1\ (k3_qc_lang1\ X0)\ (k1_zfmisc_1\ (k2_qc_lang1\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (k4_qc_lang1\ X0 = k2_zfmisc_1\ (k1_tarski_np_5)\ (k1_qc_lang1\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (k3_qc_lang1\ X0 = k2_zfmisc_1\ (k1_tarski_np_4)\ (k1_qc_lang1\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_zfmisc_1\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.\exists X5.(X4 \in X0) \wedge ((X5 \in X1) \wedge (X3 = k4_tarski_X4\ X5)))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (11)$$

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

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k2_qc_lang1\ X0)\ (k4_qc_lang1\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k2_qc_lang1\ X0)\ (k3_qc_lang1\ X0)) \Rightarrow (X1 \neq X2)))$$