

t10_substut1
(TMHQuEka8H8W8RbRm9dRmmXwHxaTeG3sxFR)

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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 $k16_substut1 : \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k1_substut1 : \iota \Rightarrow \iota$ be given. Let $k18_substut1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_substut1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k16_substut1 \\ & \quad X0)) \Rightarrow (\exists X2.(m1_subset_1 X2 (k9_qc_lang1 X0)) \wedge (\exists X3. \\ & \quad (m1_subset_1 X3 (k1_substut1 X0)) \wedge (X1 = k1_domain_1 (k9_qc_lang1 \\ & \quad \quad X0) (k1_substut1 X0) X2 X3)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ & (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k16_substut1 X0))) \Rightarrow (k19_substut1 X0 X1 = k2_xtuple_0 X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k16_substut1 X0))) \Rightarrow (k18_substut1 X0 X1 = k1_xtuple_0 X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.k2_xtuple_0 (k4_tarski X0 X1) = X1 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k1_xtuple_0 (k4_tarski X0 X1) = X0 \tag{6}$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\neg v1_xboole_0\ (k1_subst1\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\neg v1_xboole_0\ (k9_qc_lang1\ X0)) \quad (8)$$

Theorem 1

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k16_subst1\ X0)) \Rightarrow (X1 = k1_domain_1\ (k9_qc_lang1\ X0)\ (k1_subst1\ X0)\ (k18_subst1\ X0\ X1)\ (k19_subst1\ X0\ X1)))$$