

t26_substut1

(TMJ7kgXSUCq9vAYRerGG5KDNXaF9E15vmET)

October 27, 2020

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 $v4_substut1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_substut1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_3 : \iota$ be given. Let $v2_substut1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k8_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_substut1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_substut1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_substut1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k16_substut1 \\
 & X0)) \Rightarrow (((v2_substut1 X1 X0) \Rightarrow (k1_xtuple_0 (k1_funct_1 (k11_qc_lang1 \\
 & X0 (k18_substut1 X0 X1)) np_1) = k6_numbers)) \wedge ((\neg(v4_substut1 \\
 & X1 X0) \wedge (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\neg m2_subset_1 \\
 & (k1_funct_1 (k11_qc_lang1 X0 (k18_substut1 X0 X1)) np_1) (k6_qc_lang1 \\
 & X0) (k8_qc_lang1 X0 X2)))) \wedge (((v5_substut1 X1 X0) \Rightarrow (k1_xtuple_0 \\
 & (k1_funct_1 (k11_qc_lang1 X0 (k18_substut1 X0 X1)) np_1) = np_1)) \wedge \\
 & (((v6_substut1 X1 X0) \Rightarrow (k1_xtuple_0 (k1_funct_1 (k11_qc_lang1 \\
 & X0 (k18_substut1 X0 X1)) np_1) = np_2)) \wedge ((v7_substut1 X1 X0) \Rightarrow \\
 & (k1_xtuple_0 (k1_funct_1 (k11_qc_lang1 X0 (k18_substut1 X0 X1)) \\
 & np_1) = np_3)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow \\
 & (\forall X2.(m2_subset_1 X2 (k6_qc_lang1 X0) (k8_qc_lang1 X0 X1)) \Rightarrow \\
 & ((k1_xtuple_0 X2 \neq k6_numbers) \wedge ((k1_xtuple_0 X2 \neq np_1) \wedge ((k1_xtuple_0 \\
 & X2 \neq np_2) \wedge (k1_xtuple_0 X2 \neq np_3))))))
 \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k16_subst1 \\ X0)) \Rightarrow ((v4_subst1\ X1\ X0) \Rightarrow ((k1_xtuple_0\ (k1_funct_1\ (k11_qc_lang1 \\ X0\ (k18_subst1\ X0\ X1))\ np_1) \neq k6_numbers) \wedge ((k1_xtuple_0\ (k1_funct_1 \\ (k11_qc_lang1\ X0\ (k18_subst1\ X0\ X1))\ np_1) \neq np_1) \wedge ((k1_xtuple_0 \\ (k1_funct_1\ (k11_qc_lang1\ X0\ (k18_subst1\ X0\ X1))\ np_1) \neq np_2) \wedge \\ (k1_xtuple_0\ (k1_funct_1\ (k11_qc_lang1\ X0\ (k18_subst1\ X0\ X1)) \\ np_1) \neq np_3)))))) \end{aligned}$$