

t3_substut1

(TMM95BDbxTvkMKkr9psPmpKos8vQWGYEaLm)

October 27, 2020

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 $v2_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_substut1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_substut1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_cqc_lang : \iota \Rightarrow \iota$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $v3_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k22_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\
 & X0)) \Rightarrow ((k9_substut1 X0 (k5_cqc_lang X0) = k1_subset_1 (k3_qc_lang1 \\
 & X0)) \wedge (((v2_qc_lang1 X1 X0) \Rightarrow (k9_substut1 X0 X1 = k8_substut1 X0 \\
 & (k17_qc_lang1 X0 X1))) \wedge (((v3_qc_lang1 X1 X0) \Rightarrow (k9_substut1 X0 \\
 & X1 = k9_substut1 X0 (k18_qc_lang1 X0 X1))) \wedge (((v4_qc_lang1 X1 X0) \Rightarrow \\
 & (k9_substut1 X0 X1 = k4_subset_1 (k3_qc_lang1 X0) (k9_substut1 \\
 & X0 (k19_qc_lang1 X0 X1)) (k9_substut1 X0 (k20_qc_lang1 X0 X1)))) \wedge \\
 & ((v5_qc_lang1 X1 X0) \Rightarrow (k9_substut1 X0 X1 = k4_subset_1 (k3_qc_lang1 \\
 & X0) (k9_substut1 X0 (k22_qc_lang1 X0 X1)) (k6_domain_1 (k3_qc_lang1 \\
 & X0) (k21_qc_lang1 X0 X1))))))))))
 \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned}
 & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k9_qc_lang1 \\
 & X0)) \Rightarrow ((v2_qc_lang1 X1 X0) \Rightarrow (k9_substut1 X0 X1 = k8_substut1 X0 (\\
 & k17_qc_lang1 X0 X1))))
 \end{aligned}$$