

t36_sublemma (TMG- gVXY3Xo2UL3TTtEmqCao7NLrpVT3RPqW)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $v1_sublemma : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_subst1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $m1_subst1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_subst1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_sublemma : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_subst1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23_subst1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.((v1_sublemma X1 X0) \wedge \\
& (m1_subset_1 X1 (k2_zfmisc_1 (k16_subst1 X0) (k3_qc_lang1 X0)))) \Rightarrow \\
& (\forall X2.(m1_subst1 X2 X0 X1) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (k2_zfmisc_1 (k16_subst1 X0) (k3_qc_lang1 X0))) \Rightarrow (\forall X4. \\
& (m1_subst1 X4 X0 X3) \Rightarrow (((v3_subst1 X1 X0) \wedge (v3_subst1 X3 \\
& X0) \wedge (k24_subst1 X0 X1 X2 = k24_subst1 X0 X3 X4)) \Rightarrow ((k23_subst1 \\
& X0 X1 = k23_subst1 X0 X3) \wedge (X2 = X4))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.((v1_sublemma X1 X0) \wedge \\
& (m1_subset_1 X1 (k2_zfmisc_1 (k16_subst1 X0) (k3_qc_lang1 X0)))) \Rightarrow \\
& (\forall X2.(m1_subst1 X2 X0 X1) \Rightarrow ((v3_subst1 X1 X0) \Rightarrow (k9_sublemma \\
& X0 X1 X2 = k24_subst1 X0 X1 X2))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.((v1_sublemma X1 X0) \wedge \\
& (m1_subset_1 X1 (k2_zfmisc_1 (k16_subst1 X0) (k3_qc_lang1 X0)))) \Rightarrow \\
& (\forall X2.(m1_subst1 X2 X0 X1) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (k2_zfmisc_1 (k16_subst1 X0) (k3_qc_lang1 X0))) \Rightarrow (\forall X4. \\
& (m1_subst1 X4 X0 X3) \Rightarrow (((v3_subst1 X1 X0) \wedge (v3_subst1 X3 \\
& X0) \wedge (k9_sublemma X0 X1 X2 = k24_subst1 X0 X3 X4)) \Rightarrow ((k23_subst1 \\
& X0 X1 = k23_subst1 X0 X3) \wedge (X2 = X4))))))
\end{aligned}$$