

t21_mssublat
(TMJ9RVnV5rU5xqscg4aCVtrxB4roe5YXDKd)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $l3_msualg_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_msualg_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\ & \quad X0))) \Rightarrow (\forall X1.(l3_msualg_1 X1 X0) \Rightarrow (\forall X2.(l3_msualg_1 \\ & X2 X0) \Rightarrow (\forall X3.(l3_msualg_1 X3 X0) \Rightarrow (((m1_msualg_2 X1 X0 X2) \wedge \\ & \quad (m1_msualg_2 X2 X0 X3)) \Rightarrow (m1_msualg_2 X1 X0 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\ & X0))) \Rightarrow (\forall X1.(l3_msualg_1 X1 X0) \Rightarrow (m1_msualg_2 X1 X0 (g3_msualg_1 \\ & \quad X0 (u3_msualg_1 X0 X1) (u4_msualg_1 X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\ & X0))) \Rightarrow (\forall X1.(l3_msualg_1 X1 X0) \Rightarrow (m1_msualg_2 (g3_msualg_1 \\ & \quad X0 (u3_msualg_1 X0 X1) (u4_msualg_1 X0 X1)) X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge \\ & (l1_msualg_1 X0))) \wedge (l3_msualg_1 X1 X0)) \Rightarrow (\forall X2.(m1_msualg_2 \\ & \quad X2 X0 X1) \Rightarrow (l3_msualg_1 X2 X0)) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\ & \quad X0))) \Rightarrow (\forall X1.(l3_msualg_1 X1 X0) \Rightarrow (\forall X2.(l3_msualg_1 \\ & X2 X0) \Rightarrow ((m1_msualg_2 X1 X0 X2) \Leftrightarrow (m1_msualg_2 X1 X0 (g3_msualg_1 \\ & \quad X0 (u3_msualg_1 X0 X2) (u4_msualg_1 X0 X2)))))) \end{aligned}$$