

t11_msualg_2

(TMP6KdMDLWqro1atqaDnv3SVMpz3xde1gM3)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v2_msualg_2 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $v4_msualg_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v2_relat_1 : \iota \Rightarrow o$ be given. Let $k2_msualg_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m3_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\ X0))) \Rightarrow (\forall X1.(l3_msualg_1 X1 X0) \Rightarrow (\forall X2.(m1_msualg_2 \\ X2 X0 X1) \Rightarrow (m3_pboole (k2_msualg_2 X0 X1) (u1_struct_0 X0) (u3_msualg_1 \\ X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge \\ ((v2_msualg_2 X0) \wedge (l1_msualg_1 X0)))) \wedge ((v4_msualg_1 X1 X0) \wedge \\ (l3_msualg_1 X1 X0))) \Rightarrow (v2_relat_1 (k2_msualg_2 X0 X1)) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_msualg_2 \\ X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1.((v4_msualg_1 X1 X0) \wedge (l3_msualg_1 \\ X1 X0)) \Rightarrow (\forall X2.((v4_msualg_1 X2 X0) \wedge (m1_msualg_2 X2 X0 X1)) \Rightarrow \\ ((v2_relat_1 (k2_msualg_2 X0 X1)) \wedge (m3_pboole (k2_msualg_2 X0 \\ X1) (u1_struct_0 X0) (u3_msualg_1 X0 X2)))))) \end{aligned}$$