

t23_group_6

(TMV7piNwJz6mk9MG28pNyWyXQpj59oSQpJv)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_group_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_group_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k13_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0)) \Rightarrow (u1_struct_0 (k5_group_6 X0 X1) = k15_group_2 X0 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.((v1_group_3 X2 X0) \wedge (m1_group_2 X2 X0)) \Rightarrow ((k13_group_2 \\ & X0 X2 X1 \in k15_group_2 X0 X2) \wedge (k14_group_2 X0 X2 X1 \in k15_group_2 X0 \\ & X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. \forall X2. ((v1_group_3 \\ & X2 X0) \wedge (m1_group_2 X2 X0)) \Rightarrow (\neg (X1 \in k15_group_2 X0 X2) \wedge (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (X1 = k13_group_2 X0 X2 X3) \wedge \\ & (X1 = k14_group_2 X0 X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0)) \Rightarrow (l3_algstr_0 (k5_group_6 X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_struct_0 X0) \Rightarrow (\forall X1. (r1_struct_0 X0 X1) \Leftrightarrow \\ & (X1 \in u1_struct_0 X0)) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge (v2_group_1 X0) \wedge (v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0))) \Rightarrow (\forall X1. \forall X2. ((v1_group_3 \\ & X2 X0) \wedge (m1_group_2 X2 X0)) \Rightarrow ((r1_struct_0 (k5_group_6 X0 X2) X1) \Leftrightarrow \\ & (\exists X3. (m1_subset_1 X3 (u1_struct_0 X0)) \wedge ((X1 = k13_group_2 \\ & X0 X2 X3) \wedge (X1 = k14_group_2 X0 X2 X3)))))) \end{aligned}$$