

t79_group_5 (TM-
PjHygX7rrEwHnYSToDmMoh2dQLLcV2UYm)

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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 $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_group_5 : \iota \Rightarrow \iota$ be given. Let $v1_group_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow ((r1_struct_0 (k10_group_5 X0) X1) \Leftrightarrow (\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 X1 X2 = k6_algstr_0 X0 X2 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (\\ l3_algstr_0 X1))) \Rightarrow (\forall X2.(m1_group_2 X2 X1) \Rightarrow ((r1_struct_0 \\ X2 X0) \Rightarrow (r1_struct_0 X1 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (((v1_group_3 \\ X1 X0) \wedge (m1_group_2 X1 X0)) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (r1_tarski (k14_group_2 X0 X1 X2) (k13_group_2 X0 X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (\\ v3_group_1 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_group_2 X3 X1) \Rightarrow ((X0 \in k14_group_2 \\ X1 X3 X2) \Leftrightarrow (\exists X4.(m1_subset_1 X4 (u1_struct_0 X1)) \wedge ((X0 = \\ k6_algstr_0 X1 X4 X2) \wedge (r1_struct_0 X3 X4)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge \\ (v3_group_1 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 (u1_struct_0 X1)) \Rightarrow (\forall X3. (m1_group_2 X3 X1) \Rightarrow ((X0 \in k13_group_2 \\ X1 X3 X2) \Leftrightarrow (\exists X4. (m1_subset_1 X4 (u1_struct_0 X1)) \wedge ((X0 = \\ k6_algstr_0 X1 X2 X4) \wedge (r1_struct_0 X3 X4)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\ X0))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow ((\neg v2_struct_0 X1) \wedge ((v2_group_1 \\ X1) \wedge (l3_algstr_0 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow ((v15_algstr_0 (k10_group_5 X0)) \wedge (\\ m1_group_2 (k10_group_5 X0) X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow \\ (X2 \in X1)) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow ((m1_group_2 \\ X1 (k10_group_5 X0)) \Rightarrow ((v1_group_3 X1 X0) \wedge (m1_group_2 X1 X0)))) \end{aligned}$$