

t82_group_5
(TMMzbiY1Cb4DFnxs3fJfXzCu63Kv34Jsj7M)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ 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 $v5_group_1 : \iota \Rightarrow o$ be given. Let $k10_group_5 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (v5_group_1 (k10_group_5 X0)) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((r1_struct_0 (k10_group_5 X0) X1) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 X1 X2 = k6_algstr_0 X0 X2 X1)))) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (m1_group_2 X0 X0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (\forall X2.(m1_group_2 X2 X1) \Rightarrow ((r1_struct_0 X2 X0) \Rightarrow (r1_struct_0 X1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (((v15_algstr_0 X1) \wedge (m1_group_2 X1 X0)) \wedge ((v15_algstr_0 X2) \wedge (m1_group_2 X2 X0)))) \Rightarrow ((r1_group_2 X0 X1 X2) \Leftrightarrow (X1 = X2)) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow ((v15_algstr_0 (k10_group_5 X0)) \wedge (m1_group_2 (k10_group_5 X0) X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((v15_algstr_0 X1) \wedge (m1_group_2 X1 X0)) \Rightarrow (\forall X2.((v15_algstr_0 X2) \wedge (m1_group_2 X2 X0)) \Rightarrow (\\ (r1_group_2 X0 X1 X2) \Leftrightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_struct_0 X1 X3) \Leftrightarrow (r1_struct_0 X2 X3))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow ((v5_group_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 X1 X2 = k6_algstr_0 X0 X2 X1)))) \quad (8)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (l3_algstr_0 X0))))) \Leftrightarrow (k10_group_5 X0 = X0))$$