

t13_gr_cy_2 (TM- bcK3FBxozNyr8RsBtqk9RngHyGyWNdGEu)

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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 $v1_gr_cy_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_group_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g3_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k5_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow ((\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (r1_struct_0 X1 X2)) \Rightarrow (g3_algstr_0 \\ & (u1_struct_0 X1) (u2_algstr_0 X1) = g3_algstr_0 (u1_struct_0 X0) \\ & (u2_algstr_0 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_struct_0 \\ & (k5_group_4 X0 (k6_domain_1 (u1_struct_0 X0) X2)) X1) \Leftrightarrow (\exists X3. \\ & (v1_int_1 X3) \wedge (X1 = k5_group_1 X0 X3 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 \\ & X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_group_2 X3 X1) \Rightarrow ((r1_struct_0 \\ & X3 X2) \Rightarrow (r1_struct_0 X3 (k5_group_1 X1 X0 X2)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\ X0))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X1)) \Rightarrow (r1_struct_0 X0 X2))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge ((v1_gr_cy_1 X0) \wedge (l3_algstr_0 X0))))) \Rightarrow (\forall X1.(m1_group_2 \\ X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (((X0 = k5_group_4 \\ X0 (k6_domain_1 (u1_struct_0 X0) X2)) \wedge (r1_struct_0 X1 X2)) \Rightarrow (g3_algstr_0 \\ (u1_struct_0 X0) (u2_algstr_0 X0) = g3_algstr_0 (u1_struct_0 X1) \\ (u2_algstr_0 X1)))))) \end{aligned}$$