

t1_group_1 (TMRevmmnYKR- shi5GX41KTDsszrJUxWFCDxZ)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l3_algstr_0 X0) \Rightarrow ((v3_group_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 \\ X0 (k6_algstr_0 X0 X1 X2) X3 = k6_algstr_0 X0 X1 (k6_algstr_0 X0 X2 \\ X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(l3_algstr_0 X0) \Rightarrow ((v2_group_1 X0) \Leftrightarrow (\exists X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \wedge (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow ((k6_algstr_0 X0 X2 X1 = X2) \wedge ((k6_algstr_0 X0 X1 X2 = X2) \wedge (\exists X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \wedge ((k6_algstr_0 X0 X2 X3 = X1) \wedge \\ (k6_algstr_0 X0 X3 X2 = X1)))))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow ((\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ (k6_algstr_0 X0 (k6_algstr_0 X0 X1 X2) X3 = k6_algstr_0 X0 X1 (k6_algstr_0 \\ X0 X2 X3)))))) \Rightarrow ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ (\neg \forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((k6_algstr_0 \\ X0 X2 X1 = X2) \wedge ((k6_algstr_0 X0 X1 X2 = X2) \wedge (\exists X3.(m1_subset_1 \\ X3 (u1_struct_0 X0)) \wedge ((k6_algstr_0 X0 X2 X3 = X1) \wedge (k6_algstr_0 \\ X0 X3 X2 = X1)))))) \vee ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))))) \end{aligned}$$