

t8_grnilp_1 (TM- PUJ7x3xGsQFSUgQENP3evsX8hzkkDkN6B)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_group_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_group_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $k2_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k2_group_3 X0 (k3_group_5 \\ & X0 X1 (k2_group_1 X0 X2) X3) X2 = k3_group_5 X0 X2 X1 (k2_group_3 X0 \\ & X3 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 (k6_algstr_0 \\ & X0 (k2_group_3 X0 (k3_group_5 X0 X1 (k2_group_1 X0 X2) X3) X2) (k2_group_3 \\ & X0 (k3_group_5 X0 X2 (k2_group_1 X0 X3) X1) X3)) (k2_group_3 X0 (k3_group_5 \\ & X0 X3 (k2_group_1 X0 X1) X2) X1) = k1_group_1 X0)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 (k6_algstr_0 \\ & X0 (k3_group_5 X0 X1 X2 (k2_group_3 X0 X3 X1)) (k3_group_5 X0 X3 X1 \\ & (k2_group_3 X0 X2 X3))) (k3_group_5 X0 X2 X3 (k2_group_3 X0 X1 X2)) = \\ & k1_group_1 X0)))))) \end{aligned}$$