

t17_group_5
(TMS8utgC2EFq3e4TTutVtwFNVqZ8mRdd1Dk)

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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 $k2_group_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k2_group_1 \\ & X0 (k6_algstr_0 X0 X1 X2) = k6_algstr_0 X0 (k2_group_1 X0 X2) (k2_group_1 \\ & X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((k2_group_5 \\ & X0 X1 X2 = k6_algstr_0 X0 (k6_algstr_0 X0 (k6_algstr_0 X0 (k2_group_1 \\ & X0 X1) (k2_group_1 X0 X2)) X1) X2) \wedge ((k2_group_5 X0 X1 X2 = k6_algstr_0 \\ & X0 (k6_algstr_0 X0 (k2_group_1 X0 X1) (k6_algstr_0 X0 (k2_group_1 \\ & X0 X2) X1)) X2) \wedge ((k2_group_5 X0 X1 X2 = k6_algstr_0 X0 (k2_group_1 \\ & X0 X1) (k6_algstr_0 X0 (k6_algstr_0 X0 (k2_group_1 X0 X2) X1) X2)) \wedge \\ & ((k2_group_5 X0 X1 X2 = k6_algstr_0 X0 (k2_group_1 X0 X1) (k6_algstr_0 \\ & X0 (k2_group_1 X0 X2) (k6_algstr_0 X0 X1 X2))) \wedge (k2_group_5 X0 X1 \\ & X2 = k6_algstr_0 X0 (k6_algstr_0 X0 (k2_group_1 X0 X1) (k2_group_1 \\ & X0 X2)) (k6_algstr_0 X0 X1 X2)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k2_group_5 \\ & X0 X1 X2 = k6_algstr_0 X0 (k2_group_1 X0 (k6_algstr_0 X0 X2 X1)) (k6_algstr_0 \\ & X0 X1 X2)))) \end{aligned}$$