

t1_group_3
(TMK4L1WXnzs5sjVo5S9M6iHDkyKJrN2mgFP)

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

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((k6_algstr_0 X0 X1 X2 = k6_algstr_0 \\ & X0 X1 X3) \vee (k6_algstr_0 X0 X2 X1 = k6_algstr_0 X0 X3 X1)) \Rightarrow (X2 = X3)))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & X0))) \Rightarrow (m1_subset_1 (k2_group_1 X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l3_algstr_0 X0) \Rightarrow ((v3_group_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 \\ & X0 (k6_algstr_0 X0 X1 X2) X3 = k6_algstr_0 X0 X1 (k6_algstr_0 X0 X2 \\ & X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l3_algstr_0 X0) \Rightarrow ((v2_group_1 X0) \Leftrightarrow (\exists X1.(m1_subset_1 \\
& \quad X1 (u1_struct_0 X0)) \wedge (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
X0)) \Rightarrow ((k6_algstr_0 X0 X2 X1 = X2) \wedge ((k6_algstr_0 X0 X1 X2 = X2) \wedge (\exists X3. \\
& \quad (m1_subset_1 X3 (u1_struct_0 X0)) \wedge ((k6_algstr_0 X0 X2 X3 = X1) \wedge \\
& \quad (k6_algstr_0 X0 X3 X2 = X1)))))))))
\end{aligned} \tag{5}$$

Theorem 1

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