

t2_group_9
(TMGdhjGxJirGkUZyfuHa9DeLsZUu44HzuXB)

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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 $v3_group_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_group_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\ & X0))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X1) \Rightarrow (m1_subset_1 X2 (u1_struct_0 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (\\ & (v3_group_1 X1) \wedge ((v3_group_9 X1 X0) \wedge (l1_group_9 X1 X0)))))) \Rightarrow (\\ & \forall X2.(m1_group_9 X2 X0 X1) \Rightarrow ((\neg v2_struct_0 X2) \wedge ((v2_group_1 \\ & X2) \wedge ((v3_group_1 X2) \wedge ((v3_group_9 X2 X0) \wedge (l1_group_9 X2 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(l1_group_9 X1 X0) \Rightarrow (l3_algstr_0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (\\ & (v3_group_1 X1) \wedge ((v3_group_9 X1 X0) \wedge (l1_group_9 X1 X0)))))) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge ((v2_group_1 X2) \wedge ((v3_group_1 \\ & X2) \wedge ((v3_group_9 X2 X0) \wedge (l1_group_9 X2 X0)))))) \Rightarrow ((m1_group_9 \\ & X2 X0 X1) \Leftrightarrow ((m1_group_2 X2 X1) \wedge (\forall X3.(m1_subset_1 X3 X0) \Rightarrow \\ & (k3_group_9 X0 X2 X3 = k2_partfun1 (u1_struct_0 X1) (u1_struct_0 \\ & X1) (k3_group_9 X0 X1 X3) (u1_struct_0 X2)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (\\ & (v3_group_1 X1) \wedge ((v3_group_9 X1 X0) \wedge (l1_group_9 X1 X0)))))) \Rightarrow (\\ & \forall X2.(m1_group_9 X2 X0 X1) \Rightarrow (\forall X3.(m1_subset_1 X3 (\\ & u1_struct_0 X2) \Rightarrow (m1_subset_1 X3 (u1_struct_0 X1)))) \end{aligned}$$