

t1_group_9

(TMN55UdbL5WEwrAAVgGv5kRanMRQeN2HcRT)

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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 $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (\forall X2. (m1_group_2 X2 X1) \Rightarrow ((r1_struct_0 X2 X0) \Rightarrow (r1_struct_0 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (v3_group_1 X1) \wedge ((v3_group_9 X1 X0) \wedge (l1_group_9 X1 X0)))) \Rightarrow (\forall X2. (m1_group_9 X2 X0 X1) \Rightarrow ((\neg v2_struct_0 X2) \wedge ((v2_group_1 X2) \wedge ((v3_group_1 X2) \wedge ((v3_group_9 X2 X0) \wedge (l1_group_9 X2 X0)))))) \quad (2)$$

Assume the following.

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

Assume the following.

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

Theorem 1

$$\forall X0.\forall X1.\forall X2.((\neg v2_struct_0 X2)\wedge((v2_group_1 X2)\wedge((v3_group_1 X2)\wedge((v3_group_9 X2 X0)\wedge(l1_group_9 X2 X0))))))\Rightarrow (\forall X3.(m1_group_9 X3 X0 X2)\Rightarrow((r1_struct_0 X3 X1)\Rightarrow(r1_struct_0 X2 X1)))$$