

t7_autalg_1 (TMK- wEeWdy5pRdqUJzAbxj2nz6TxZ8fDZqYw)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_unialg_1 : \iota \Rightarrow o$ be given. Let $v3_unialg_1 : \iota \Rightarrow o$ be given. Let $v4_unialg_1 : \iota \Rightarrow o$ be given. Let $l1_unialg_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_autalg_1 : \iota \Rightarrow \iota$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_autalg_1 : \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g3_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ 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 $k2_autalg_1 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 \\ & X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0)))) \Rightarrow (\forall X2. \forall X3. (g3_algstr_0 X0 X1 = g3_algstr_0 \\ & X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ & X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))) \Rightarrow ((\neg v2_struct_0 \\ & (k3_autalg_1 X0)) \wedge ((v15_algstr_0 (k3_autalg_1 X0)) \wedge ((v2_group_1 \\ & (k3_autalg_1 X0)) \wedge (v3_group_1 (k3_autalg_1 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ & X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))) \Rightarrow ((\neg v2_struct_0 \\ & (k3_autalg_1 X0)) \wedge ((v2_group_1 (k3_autalg_1 X0)) \wedge ((v3_group_1 \\ & (k3_autalg_1 X0)) \wedge (l3_algstr_0 (k3_autalg_1 X0)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow ((v1_funct_1 (k2_autalg_1 X0)) \wedge ((v1_funct_2 (k2_autalg_1 X0) (k2_zfmisc_1 (k1_autalg_1 X0) (k1_autalg_1 X0)) (k1_autalg_1 X0)) \wedge (m1_subset_1 (k2_autalg_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_autalg_1 X0) (k1_autalg_1 X0)) (k1_autalg_1 X0))))))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (k3_autalg_1 X0 = g3_algstr_0 (k1_autalg_1 X0) (k2_autalg_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (k1_autalg_1 X0) (k1_autalg_1 X0)) (k1_autalg_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_autalg_1 X0) (k1_autalg_1 X0)) (k1_autalg_1 X0)))))) \Rightarrow ((X1 = k2_autalg_1 X0) \Leftrightarrow (\forall X2.(m2_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X0) (k1_autalg_1 X0)) \Rightarrow (\forall X3.(m2_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X0) (k1_autalg_1 X0)) \Rightarrow (k5_binop_1 (k1_autalg_1 X0) X1 X2 X3 = k1_partfun1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X2 X3)))))) \quad (6)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 X1 X2 = k5_binop_1 (u1_struct_0 X0) (u2_algstr_0 X0) X1 X2))) \quad (7)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow ((v15_algstr_0 X0) \Rightarrow (X0 = g3_algstr_0 (u1_struct_0 X0) (u2_algstr_0 X0))) \quad (8)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k3_autalg_1 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k3_autalg_1 X0))) \Rightarrow (\forall X3.(m2_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X0) (k1_autalg_1 X0)) \Rightarrow (\forall X4.(m2_funct_2 X4 (u1_struct_0 X0) (u1_struct_0 X0) (k1_autalg_1 X0)) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k6_algstr_0 (k3_autalg_1 X0) X1 X2 = k1_partfun1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X3 X4)))))))))$$