

t4_endalg (TMQcUN-
wiJ6ZXi1Rzi81STV9SmKJLqTG927B)

October 27, 2020

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 $k3_endalg : \iota \Rightarrow \iota$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_endalg : \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $v22_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_endalg : \iota \Rightarrow \iota$ 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 $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0))))) \Rightarrow ((v22_algstr_0 (k3_endalg X0)) \wedge (l4_algstr_0 (k3_endalg X0))) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0))))) \Rightarrow ((v1_funct_1 (k2_endalg X0)) \wedge ((v1_funct_2 (k2_endalg X0) (k2_zfmisc_1 (k1_endalg X0) (k1_endalg X0)) (k1_endalg X0)) \wedge (m1_subset_1 (k2_endalg X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_endalg X0) (k1_endalg X0)) (k1_endalg X0)))))) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.((v22_algstr_0 \\ X1) \wedge (l4_algstr_0 X1)) \Rightarrow ((X1 = k3_endalg X0) \Leftrightarrow ((u1_struct_0 X1 = \\ k1_endalg X0) \wedge ((u2_algstr_0 X1 = k2_endalg X0) \wedge (k5_struct_0 X1 = \\ k6_partfun1 (u1_struct_0 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.((v1_funct_1 \\ X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (k1_endalg X0) (k1_endalg X0)) \\ (k1_endalg X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ (k1_endalg X0) (k1_endalg X0)) (k1_endalg X0)))))) \Rightarrow ((X1 = k2_endalg \\ X0) \Leftrightarrow (\forall X2.(m2_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ X0) (k1_endalg X0)) \Rightarrow (\forall X3.(m2_funct_2 X3 (u1_struct_0 X0) \\ (u1_struct_0 X0) (k1_endalg X0)) \Rightarrow (k5_binop_1 (k1_endalg X0) X1 \\ X2 X3 = k1_partfun1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\ X0) (u1_struct_0 X0) X2 X3)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l3_algstr_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 \\ X0 X1 X2 = k5_binop_1 (u1_struct_0 X0) (u2_algstr_0 X0) X1 X2))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 (k3_endalg X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (u1_struct_0 (k3_endalg X0))) \Rightarrow (\forall X3.(m2_funct_2 X3 (u1_struct_0 \\ X0) (u1_struct_0 X0) (k1_endalg X0)) \Rightarrow (\forall X4.(m2_funct_2 \\ X4 (u1_struct_0 X0) (u1_struct_0 X0) (k1_endalg X0)) \Rightarrow (((X1 = X3) \wedge \\ (X2 = X4)) \Rightarrow (k6_algstr_0 (k3_endalg X0) X1 X2 = k1_partfun1 (u1_struct_0 \\ X0) (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X3 X4)))))) \end{aligned}$$