

t10_endalg
(TMVt8dtXjyx5xcieeBsKEXj98znGxrRxxgWH)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $v4_msualg_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l3_msualg_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_endalg : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_autalg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_endalg : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_msualg_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_endalg : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_msualg_3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge \\ & (l1_msualg_1 X0))) \wedge ((v4_msualg_1 X1 X0) \wedge (l3_msualg_1 X1 X0))) \Rightarrow \\ & ((v22_algstr_0 (k6_endalg X0 X1)) \wedge (l4_algstr_0 (k6_endalg X0 \\ & X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge \\ & (l1_msualg_1 X0))) \wedge ((v4_msualg_1 X1 X0) \wedge (l3_msualg_1 X1 X0))) \Rightarrow \\ & ((v1_funct_1 (k5_endalg X0 X1)) \wedge ((v1_funct_2 (k5_endalg X0 X1) \\ & (k2_zfmisc_1 (k4_endalg X0 X1) (k4_endalg X0 X1)) (k4_endalg X0 \\ & X1)) \wedge (m1_subset_1 (k5_endalg X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 (k4_endalg X0 X1) (k4_endalg X0 X1)) (k4_endalg X0 \\ & X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\
& X0))) \Rightarrow (\forall X1.((v4_msualg_1 X1 X0) \wedge (l3_msualg_1 X1 X0)) \Rightarrow \\
& (\forall X2.((v22_algstr_0 X2) \wedge (l4_algstr_0 X2)) \Rightarrow ((X2 = k6_endalg \\
& X0 X1) \Leftrightarrow ((u1_struct_0 X2 = k4_endalg X0 X1) \wedge ((u2_algstr_0 X2 = k5_endalg \\
& X0 X1) \wedge (k5_struct_0 X2 = k2_msualg_3 (u1_struct_0 X0) (u3_msualg_1 \\
& X0 X1))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\
& X0))) \Rightarrow (\forall X1.((v4_msualg_1 X1 X0) \wedge (l3_msualg_1 X1 X0)) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 (k4_endalg \\
& X0 X1) (k4_endalg X0 X1)) (k4_endalg X0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 (k4_endalg X0 X1) (k4_endalg X0 X1)) \\
& (k4_endalg X0 X1)))))) \Rightarrow ((X2 = k5_endalg X0 X1) \Leftrightarrow (\forall X3.(m1_autalg_1 \\
& X3 (u1_struct_0 X0) (u3_msualg_1 X0 X1) (k4_endalg X0 X1)) \Rightarrow (\forall X4. \\
& (m1_autalg_1 X4 (u1_struct_0 X0) (u3_msualg_1 X0 X1) (k4_endalg \\
& X0 X1)) \Rightarrow (k5_binop_1 (k4_endalg X0 X1) X2 X3 X4 = k3_msualg_3 (u1_struct_0 \\
& X0) (u3_msualg_1 X0 X1) (u3_msualg_1 X0 X1) (u3_msualg_1 X0 X1) X3 \\
& X4))))))
\end{aligned} \tag{5}$$

Assume the following.

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

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\
& X0))) \Rightarrow (\forall X1.((v4_msualg_1 X1 X0) \wedge (l3_msualg_1 X1 X0)) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k6_endalg X0 X1))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k6_endalg X0 X1))) \Rightarrow \\
& (\forall X4.(m1_autalg_1 X4 (u1_struct_0 X0) (u3_msualg_1 X0 X1) \\
& (k4_endalg X0 X1)) \Rightarrow (\forall X5.(m1_autalg_1 X5 (u1_struct_0 X0) \\
& (u3_msualg_1 X0 X1) (k4_endalg X0 X1)) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k6_algstr_0 \\
& (k6_endalg X0 X1) X2 X3 = k3_msualg_3 (u1_struct_0 X0) (u3_msualg_1 \\
& X0 X1) (u3_msualg_1 X0 X1) (u3_msualg_1 X0 X1) X4 X5))))))
\end{aligned}$$