

t7_algstr_2

(TMH3EZmCYg8UqV3MaxzCm2tJSgAiqwMLB1n)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_algstr_1 : \iota \Rightarrow o$ be given. Let $v4_algstr_1 : \iota \Rightarrow o$ be given. Let $v7_algstr_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v2_vectsp_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $v5_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_algstr_1 : \iota \Rightarrow o$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v6_algstr_1 : \iota \Rightarrow o$ be given. Let $v32_algstr_0 : \iota \Rightarrow o$ be given. Let $v6_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_algstr_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (1)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (2)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l3_algstr_0 X0) \wedge ((m1_subset_1 \\ & X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 \\ & (k6_algstr_0 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v5_algstr_0 X0) \wedge \\ & ((v3_algstr_1 X0) \wedge (l2_algstr_0 X0)))) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & X0))) \Rightarrow (m1_subset_1 (k1_algstr_2 X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow ((v2_vectsp_1 \\ X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 (k1_algstr_0 X0 X2 X3) X1 = k1_algstr_0 \\ X0 (k6_algstr_0 X0 X2 X1) (k6_algstr_0 X0 X3 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v5_algstr_0 X0) \wedge ((v3_algstr_1 \\ X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 = k1_algstr_2 \\ X0 X1) \Leftrightarrow (k1_algstr_0 X0 X1 X2 = k4_struct_0 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l5_algstr_0 X0)) \Rightarrow ((v7_algstr_1 \\ X0) \Leftrightarrow ((v6_algstr_1 X0) \wedge ((v32_algstr_0 X0) \wedge ((\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 X1 (k4_struct_0 X0) = k4_struct_0 \\ X0)) \wedge (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 \\ X0 (k4_struct_0 X0) X1 = k4_struct_0 X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l2_algstr_0 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v4_algstr_1 \\ X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v5_algstr_0 X0) \wedge ((v6_algstr_0 X0) \wedge \\ ((v2_algstr_1 X0) \wedge (v3_algstr_1 X0)))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_algstr_1 X0) \wedge ((v4_algstr_1 \\ X0) \wedge ((v7_algstr_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_vectsp_1 X0) \wedge \\ ((v4_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (k6_algstr_0 X0 (k1_algstr_2 X0 X1) X2 = k1_algstr_2 X0 (k6_algstr_0 \\ X0 X1 X2)))) \end{aligned}$$