

t4_vectsp_1
(TMKejJmnuRDSUrdBufp78sCY4YAybkSBv8d)

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Let $v2_struct_0 : \iota \Rightarrow o$ 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 $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l5_algstr_0 X0)) \Rightarrow ((v33_algstr_0 \\ X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\neg (X1 \neq k4_struct_0 \\ X0) \wedge (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 \\ X0 X2 X1 \neq k5_struct_0 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow ((v5_vectsp_1 \\ X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow ((k6_algstr_0 X0 X1 (k1_algstr_0 X0 X2 X3) = k1_algstr_0 \\ X0 (k6_algstr_0 X0 X1 X2) (k6_algstr_0 X0 X1 X3)) \wedge (k6_algstr_0 X0 \\ (k1_algstr_0 X0 X2 X3) X1 = k1_algstr_0 X0 (k6_algstr_0 X0 X2 X1) (\\ k6_algstr_0 X0 X3 X1)))))))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow ((\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ & ((\neg(X1 \neq k4_struct_0 X0) \wedge (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & X0)) \Rightarrow (k6_algstr_0 X0 X4 X1 \neq k5_struct_0 X0))) \wedge ((k6_algstr_0 X0 \\ & X1 (k1_algstr_0 X0 X2 X3) = k1_algstr_0 X0 (k6_algstr_0 X0 X1 X2) (\\ & k6_algstr_0 X0 X1 X3)) \wedge (k6_algstr_0 X0 (k1_algstr_0 X0 X2 X3) X1 = \\ & k1_algstr_0 X0 (k6_algstr_0 X0 X2 X1) (k6_algstr_0 X0 X3 X1)))))) \Leftrightarrow \\ & ((\neg v2_struct_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 \\ & X0)))) \end{aligned}$$