

t17_vectsp_1
(TMM6SUWCCmmqb4HnDWSsnCwokuJHPd4SAjs)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ &X0)) \Rightarrow (k4_algstr_0 X0 (k5_algstr_0 X0 X1 X2) = k1_algstr_0 X0 X2 (\\ &k4_algstr_0 X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ &X0)) \Rightarrow (k4_algstr_0 X0 (k1_algstr_0 X0 X1 X2) = k5_algstr_0 X0 (k4_algstr_0 \\ &X0 X2) X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ &X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k5_algstr_0 \\ &X0 X1 (k1_algstr_0 X0 X2 X3) = k5_algstr_0 X0 (k5_algstr_0 X0 X1 X3) \\ &X2)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (k4_algstr_0 X0 (k5_algstr_0 X0 (k4_algstr_0 X0 X1) X2) = k1_algstr_0 \\ X0 X2 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(l2_algstr_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k5_algstr_0 \\ X0 X1 X2 = k1_algstr_0 X0 X1 (k4_algstr_0 X0 X2)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((k4_algstr_0 \\ X0 (k1_algstr_0 X0 X2 X3) = k5_algstr_0 X0 (k4_algstr_0 X0 X3) X2) \wedge \\ ((k4_algstr_0 X0 (k1_algstr_0 X0 X3 (k4_algstr_0 X0 X2)) = k5_algstr_0 \\ X0 X2 X3) \wedge ((k4_algstr_0 X0 (k5_algstr_0 X0 X2 X3) = k1_algstr_0 X0 \\ X3 (k4_algstr_0 X0 X2)) \wedge ((k4_algstr_0 X0 (k5_algstr_0 X0 (k4_algstr_0 \\ X0 X2) X3) = k1_algstr_0 X0 X3 X2) \wedge (k5_algstr_0 X0 X1 (k1_algstr_0 \\ X0 X3 X2) = k5_algstr_0 X0 (k5_algstr_0 X0 X1 X2) X3)))))))) \end{aligned}$$