

t1_vectsp_1 (TM- MVEpEz7K17cue2M8iWmzxNChf95k9NiCg)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_vectsp_1 : \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $v8_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow ((k1_algstr_0 X0 X1 (k4_algstr_0 X0 X1) = k4_struct_0 \\ X0) \wedge (k1_algstr_0 X0 (k4_algstr_0 X0 X1) X1 = k4_struct_0 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((v2_rlvect_1 X0) \wedge (l1_algstr_0 \\ X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ X0)))) \Rightarrow (k3_rlvect_1 X0 X1 X2 = k1_algstr_0 X0 X1 X2) \end{aligned} \quad (2)$$

Assume the following.

$$(v8_algstr_0 k1_vectsp_1) \wedge ((v13_algstr_0 k1_vectsp_1) \wedge ((v2_rlvect_1 \\ k1_vectsp_1) \wedge ((v3_rlvect_1 k1_vectsp_1) \wedge (v4_rlvect_1 k1_vectsp_1)))) \quad (3)$$

Assume the following.

$$(\neg v2_struct_0 k1_vectsp_1) \wedge (v8_algstr_0 k1_vectsp_1) \quad (4)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (m1_subset_1 (k4_struct_0 X0) (u1_struct_0 \\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((l2_algstr_0 X0)\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k4_algstr_0 X0 X1) (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$(v8_algstr_0 k1_vectsp_1)\wedge(l2_algstr_0 k1_vectsp_1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_algstr_0 X0)\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k1_algstr_0 X0 X1 X2) (u1_struct_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0)\Rightarrow((v4_rlvect_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k1_algstr_0 X0 X1 (k4_struct_0 X0) = X1))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_algstr_0 X0)\Rightarrow((v3_rlvect_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(k1_algstr_0 X0 (k1_algstr_0 X0 X1 X2) X3 = k1_algstr_0 X0 X1 (k1_algstr_0 X0 X2 X3)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2_rlvect_1 X0)\wedge(l1_algstr_0 X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k3_rlvect_1 X0 X1 X2 = k3_rlvect_1 X0 X2 X1) \quad (12)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k1_vectsp_1))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 k1_vectsp_1))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 k1_vectsp_1))\Rightarrow((k3_rlvect_1 k1_vectsp_1 X0 X1 = k3_rlvect_1 k1_vectsp_1 X1 X0)\wedge((k3_rlvect_1 k1_vectsp_1 (k3_rlvect_1 k1_vectsp_1 X0 X1) X2 = k3_rlvect_1 k1_vectsp_1 X0 (k3_rlvect_1 k1_vectsp_1 X1 X2))\wedge((k3_rlvect_1 k1_vectsp_1 X0 (k4_struct_0 k1_vectsp_1) = X0)\wedge(k3_rlvect_1 k1_vectsp_1 X0 (k4_algstr_0 k1_vectsp_1 X0) = k4_struct_0 k1_vectsp_1))))))$$