

t28_vectsp_6 (TMSr- GAoZnHrYU1tgrfJjdUVPvEHA58PCQ2F)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $v8_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_vectsp_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_vectsp_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_vectsp_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_vectsp_1 : \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_vectsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v4_rlvect_1 X0) \wedge ((v1_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 X0 \\ & X1 (k4_struct_0 X0) = k4_struct_0 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\ & X0)\wedge((v13_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge \\ & ((v5_vectsp_1 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 \\ & X0)\wedge(l6_algstr_0 X0))))))))\wedge(((\neg v2_struct_0 X1)\wedge((v13_algstr_0 \\ & X1)\wedge((v8_vectsp_1 X1 X0)\wedge((v9_vectsp_1 X1 X0)\wedge((v10_vectsp_1 \\ & X1 X0)\wedge((v11_vectsp_1 X1 X0)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 \\ & X1)\wedge((v4_rlvect_1 X1)\wedge(l1_vectsp_1 X1 X0))))))))))\wedge((m1_subset_1 \\ & X2 (u1_struct_0 X0))\wedge(m1_vectsp_6 X3 X0 X1)))\Rightarrow(m1_vectsp_6 (\\ & k6_vectsp_6 X0 X1 X2 X3) X0 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v3_group_1 \\ & X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge((v2_rlvect_1 X0)\wedge \\ & ((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge(l6_algstr_0 X0))))))))\Rightarrow \\ & (\forall X1.(((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v8_vectsp_1 \\ & X1 X0)\wedge((v9_vectsp_1 X1 X0)\wedge((v10_vectsp_1 X1 X0)\wedge((v11_vectsp_1 \\ & X1 X0)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge \\ & (l1_vectsp_1 X1 X0))))))))))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0))\Rightarrow(\forall X3.(m1_vectsp_6 X3 X0 X1)\Rightarrow(\forall X4.(m1_vectsp_6 \\ & X4 X0 X1)\Rightarrow((X4 = k6_vectsp_6 X0 X1 X2 X3)\Leftrightarrow(\forall X5.(m1_subset_1 \\ & X5 (u1_struct_0 X1))\Rightarrow(k3_funct_2 (u1_struct_0 X1) (u1_struct_0 \\ & X0) X4 X5 = k6_algstr_0 X0 X2 (k3_funct_2 (u1_struct_0 X1) (u1_struct_0 \\ & X0) X3 X5)))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0)\wedge(l2_struct_0 X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge(l1_vectsp_1 X1 X0))\Rightarrow(\forall X2.(m1_vectsp_6 \\ & X2 X0 X1)\Rightarrow(k1_vectsp_6 X0 X1 X2 = ReplSep (toset (\lambda X3 : \iota.m1_subset_1 \\ & X3 (u1_struct_0 X1))) (\lambda X3 : \iota.k3_funct_2 (u1_struct_0 X1) \\ & (u1_struct_0 X0) X2 X3 \neq k4_struct_0 X0) (\lambda X3 : \iota.X3)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v5_vectsp_1 X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v1_vectsp_1 X0)\wedge(v2_vectsp_1 X0)))) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v3_group_1 \\ & X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v8_vectsp_1 \\ X1 X0) \wedge (v9_vectsp_1 X1 X0) \wedge (v10_vectsp_1 X1 X0) \wedge (v11_vectsp_1 \\ X1 X0) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\ (l1_vectsp_1 X1 X0)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0) \Rightarrow (\forall X3.(m1_vectsp_6 X3 X0 X1) \Rightarrow (r1_tarski (k1_vectsp_6 \\ X0 X1 (k6_vectsp_6 X0 X1 X2 X3)) (k1_vectsp_6 X0 X1 X3)))))) \end{aligned}$$