

t8_vectmetr
(TML6LNyftBHwgqmuNcYhXr8qaYvrVxm7ttu)

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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 $v6_vectmetr : \iota \Rightarrow o$ be given. Let $l1_vectmetr : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_vectmetr : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ &X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((X1 = k1_algstr_0 \\ &X0 X2 X3) \Leftrightarrow (X2 = k5_algstr_0 X0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow ((k1_algstr_0 X0 X1 (k4_struct_0 X0) = X1) \wedge \\ &(k1_algstr_0 X0 (k4_struct_0 X0) X1 = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (k5_algstr_0 X0 X1 X1 = k4_struct_0 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1_vectmetr X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_metric_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l2_algstr_0 X0)\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k5_algstr_0 X0 X1 X2) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_vectmetr X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k3_vectmetr X0 X1 = k2_metric_1 X0 (k4_struct_0 X0) X1)) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_vectmetr X0))\Rightarrow((v6_vectmetr X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(k2_metric_1 X0 X3 X2 = k2_metric_1 X0 (k1_algstr_0 X0 X3 X1) (k1_algstr_0 X0 X2 X1)))))) \quad (8)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v6_vectmetr X0)\wedge(l1_vectmetr X0))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(k2_metric_1 X0 X1 X2 = k3_vectmetr X0 (k5_algstr_0 X0 X2 X1))))$$