

t9_scmring3
(TMX1BQYd1sK2kQHxN1eMjnjqjG1yx1kHbdw)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ 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 $v3_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $k1_scmring2 : \iota \Rightarrow \iota$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k7_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_5 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $k4_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $v5_compos_0 : \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\ & (m1_subset_1 X1 X0)) \Rightarrow (k2_compos_0 X0 X1 = k4_xtuple_0 X1) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k1_xtuple_0 (k4_tarski X0 X1) = X0 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_compos_1 X0) \Rightarrow ((v1_compos_0 (u1_compos_1 X0)) \wedge \\ & ((v2_compos_0 (u1_compos_1 X0)) \wedge ((v3_compos_0 (u1_compos_1 \\ & X0)) \wedge (v5_compos_0 (u1_compos_1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge \\ & (l1_compos_1 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 \\ & X0) \wedge (v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (l6_algstr_0 \\ & X0)))))) \wedge (((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\ & X0)))) \wedge (m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k7_scmring2 \\ & X0 X1 X2) (u1_compos_1 (k1_scmring2 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v3_group_1 X0) \wedge \\ & (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))) \Rightarrow \\ & ((v1_extpro_1 (k1_scmring2 X0) np_2) \wedge (l1_extpro_1 (k1_scmring2 \\ & X0) np_2)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v3_group_1 X0) \wedge \\ & (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))) \Rightarrow \\ & (\forall X1. ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\ & X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0) \Rightarrow (k7_scmring2 \\ & X0 X1 X2 = k3_xtuple_0 np_5 k1_xboole_0 (k10_finseq_1 X1 X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. k4_xtuple_0 X0 = k1_xtuple_0 (k1_xtuple_0 X0) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k3_xtuple_0 X0 X1 X2 = k4_tarski \\ (k4_tarski X0 X1) X2 \quad (9)$$

Assume the following.

$$\forall X0. (v5_compos_0 X0) \Rightarrow (\neg v1_xboole_0 X0) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v3_group_1 X0) \wedge \\ & (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0) \Rightarrow (\forall X2. ((\\ & v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow \\ & (k2_compos_0 (u1_compos_1 (k1_scmring2 X0)) (k7_scmring2 X0 X2 \\ & X1) = np_5)))))) \end{aligned}$$