

t22_scmring2 (TMdqCHkULD- cvRqxip1esn2CDrZJNbRsY1AT)

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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 $k8_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scmring2 : \iota \Rightarrow \iota$ be given. Let $k1_ami_3 : \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_ami_2 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_scm_inst : \iota$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_ami_2 : \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmringi : \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_ami_2 : \iota$ be given. Let $u2_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmring1 : \iota \Rightarrow \iota$ be given. Let $u1_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_scmring1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. k4_xboole_0 X0 k1_xboole_0 = X0 \quad (1)$$

Assume the following.

$$k8_struct_0 k1_ami_3 = k2_ami_2 \quad (2)$$

Assume the following.

$$\neg k5_numbers \in k2_ami_2 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (\neg X0 \in X1) \Rightarrow (k4_xboole_0 (k2_xboole_0 X1) (k1_tarski X0)) (k1_tarski X0) = X1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$k2_ami_2 = k2_scm_inst \quad (8)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(l1_memstr_0 X1 X0)\Rightarrow(l2_struct_0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(l1_extpro_1 X1 X0)\Rightarrow((l1_memstr_0 X1 X0)\wedge(l1_compos_1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.m1_subset_1 (k6_subset_1 X0 X1) (k1_zfmisc_1 X0) \quad (12)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 \\ &X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v3_group_1 X0)\wedge(\\ &(v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))\Rightarrow \\ &((v1_extpro_1 (k1_scmring2 X0) np_2)\wedge(l1_extpro_1 (k1_scmring2 \\ &X0) np_2)) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(k4_struct_0 X0 = u2_struct_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k2_struct_0 X0 = u1_struct_0 X0) \quad (15)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge \\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0))))))))) \Rightarrow \\
& (\forall X1.((v1_extpro_1 X1 np_2) \wedge (l1_extpro_1 X1 np_2)) \Rightarrow \\
& ((X1 = k1_scmring2 X0) \Leftrightarrow ((u1_struct_0 X1 = k1_ami_2) \wedge ((u2_struct_0 \\
& X1 = k5_numbers) \wedge ((u1_compos_1 X1 = k1_scmringi X0) \wedge ((r1_funct_2 \\
& (u1_struct_0 X1) np_2 k1_ami_2 np_2 (u1_memstr_0 np_2 X1) k3_ami_2) \wedge \\
& ((u2_memstr_0 np_2 X1 = k1_scmring1 X0) \wedge (u1_extpro_1 np_2 X1 = \\
& k8_scmring1 X0)))))))))
\end{aligned} \tag{16}$$

Assume the following.

$$k1_ami_2 = k2_xboole_0 (k1_tarski k5_numbers) k2_scm_inst \tag{17}$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (k8_struct_0 X0 = k7_subset_1 (u1_struct_0 X0) (k2_struct_0 X0) (k1_tarski (k4_struct_0 X0))) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \tag{19}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge \\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0))))))))) \Rightarrow \\
& (k8_struct_0 (k1_scmring2 X0) = k8_struct_0 k1_ami_3)
\end{aligned}$$