

t18_ospace
(TMYEZqop8iNUMGERnf4fMXesVF62WkE5EbS)

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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 $k2_ospace : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ospace : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k5_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_ospace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $k1_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$k3_rlvect_1 \ k2_ospace \ (k5_struct_0 \ k2_ospace) \ (k5_struct_0 \ k2_ospace) = k4_struct_0 \ k2_ospace \tag{1}$$

Assume the following.

$$k5_struct_0 \ k2_ospace = np_1 \tag{2}$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (X0 = k1_xboole_0) \tag{3}$$

Assume the following.

$$k4_struct_0 \ k2_ospace = k1_xboole_0 \tag{4}$$

Assume the following.

$$\forall X0.k5_xboole_0 \ X0 \ k1_xboole_0 = X0 \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow ((k1_algstr_0 X0 X1 (k4_struct_0 X0) = X1) \wedge \\ (k1_algstr_0 X0 (k4_struct_0 X0) X1 = X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k2_bspace)) \Rightarrow ((X0 = k1_xboole_0) \vee \\ (X0 = np_1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee \\ (X0 \in X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X0 \in k5_xboole_0 X1 X2) \Leftrightarrow (\neg(X0 \in \\ X1) \Leftrightarrow (X0 \in X2)) \quad (9)$$

Assume the following.

$$\forall X0.k3_bspace k1_xboole_0 X0 = k4_struct_0 k2_bspace \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k5_subset_1 X0 X1 X2 = \\ k5_xboole_0 X1 X2) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2_rlvect_1 X0) \wedge (l1_algstr_0 \\ X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ X0)))) \Rightarrow (k3_rlvect_1 X0 X1 X2 = k1_algstr_0 X0 X1 X2) \quad (12)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (13)$$

Assume the following.

$$\forall X0.v1_xboole_0 (k1_subset_1 X0) \quad (14)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (u1_struct_0 \\ k2_bspace)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (m1_subset_1 \\ (k4_bspace X0 X1 X2) (k1_zfmisc_1 X0)) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.m1_subset_1 (k3_bspace X0 X1) (u1_struct_0 \\ k2_bspace) \quad (18)$$

Assume the following.

$$\begin{aligned} (\neg v2_struct_0 k2_bspace) \wedge ((\neg v6_struct_0 k2_bspace) \wedge ((v13_algstr_0 \\ k2_bspace) \wedge ((v33_algstr_0 k2_bspace) \wedge ((v3_group_1 k2_bspace) \wedge \\ ((v5_group_1 k2_bspace) \wedge ((v4_vectsp_1 k2_bspace) \wedge ((v5_vectsp_1 \\ k2_bspace) \wedge ((v2_rlvect_1 k2_bspace) \wedge ((v3_rlvect_1 k2_bspace) \wedge \\ ((v4_rlvect_1 k2_bspace) \wedge (l6_algstr_0 k2_bspace)))))))))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.m1_subset_1 (k1_subset_1 X0) (k1_zfmisc_1 X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.m1_subset_1 (k1_funct_7 X0 X1) X1 \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.k5_xboole_0 X0 X1 = k2_xboole_0 (k4_xboole_0 \\ X0 X1) (k4_xboole_0 X1 X0) \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1 X1 (u1_struct_0 k2_bspace)) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (((X1 = k5_struct_0 \\ k2_bspace) \Rightarrow (k4_bspace X0 X1 X2 = X2)) \wedge ((X1 = k4_struct_0 k2_bspace) \Rightarrow \\ (k4_bspace X0 X1 X2 = k1_subset_1 X0)))) \end{aligned} \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((X1 \in X0) \Rightarrow (k3_bspace X0 X1 = k5_struct_0 \\ k2_bspace)) \wedge ((\neg X1 \in X0) \Rightarrow (k3_bspace X0 X1 = k4_struct_0 k2_bspace)) \quad (24)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k5_subset_1 X0 X1 X2 = \\ k5_subset_1 X0 X2 X1) \end{aligned} \quad (25)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 k2_bspace)) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 k2_bspace)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 X0)) \Rightarrow (k4_bspace X0 (k3_rlvect_1 \\ & k2_bspace X1 X2) X3 = k5_subset_1 X0 (k4_bspace X0 X1 X3) (k4_bspace \\ & X0 X2 X3)))) \end{aligned}$$