

t44_cc0sp2
(TMHFrVptaffwCEuNbVxS1JAdv5mdj53yiFY)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k7_cc0sp2 : \iota \Rightarrow \iota$ be given. Let $k1_cc0sp2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $m1_clvect_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_clvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_cc0sp2 : \iota \Rightarrow \iota$ be given. Let $k10_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_cfunclom : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_csspace : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v2_clvect_1 : \iota \Rightarrow o$ be given. Let $v3_clvect_1 : \iota \Rightarrow o$ be given. Let $v4_clvect_1 : \iota \Rightarrow o$ be given. Let $v5_clvect_1 : \iota \Rightarrow o$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_funcl_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_funcl_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funcl_1 : \iota \Rightarrow o$ be given. Let $v1_funcl_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_clvect_1 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k9_funcl_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_cfunclom : \iota \Rightarrow \iota$ be given. Let $k3_cfunclom : \iota \Rightarrow \iota$ be given. Let $k1_cfunclom : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u1_clvect_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (m1_clvect_1 (g1_clvect_1 (k6_cc0sp2 X0) (k10_csspace \\ & (k6_cfunclom (u1_struct_0 X0) (k6_cc0sp2 X0)) (k1_c0sp1 (k6_cfunclom \\ & (u1_struct_0 X0) (k6_cc0sp2 X0)) (k9_csspace (k6_cfunclom (u1_struct_0 \\ & X0) (k6_cc0sp2 X0)))) (k6_cfunclom (u1_struct_0 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\ ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge (l1_clvect_1 \\ X0)))))))))) \Rightarrow (\forall X1.(m1_clvect_1 X1 X0) \Rightarrow (k4_struct_0 X1 = \\ k4_struct_0 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X1) \wedge (m1_funct_2 \\ X2 X0 X1)) \Rightarrow (\forall X3.(m2_funct_2 X3 X0 X1 X2) \Leftrightarrow (m1_subset_1 X3 \\ X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 \\ X2 X0)) \Rightarrow (k8_funcop_1 X0 X1 X2 = k2_funcop_1 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \wedge ((\neg v1_xboole_0 X1) \wedge (v2_compts_1 X1 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X1 \\ X0) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) \\ X0)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (k2_zfmisc_1 k2_numbers \\ X0) X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ k2_numbers X0) X0)))))) \Rightarrow (\forall X4.\forall X5.\forall X6.\forall X7. \\ (g1_clvect_1 X0 X1 X2 X3 = g1_clvect_1 X4 X5 X6 X7) \Rightarrow ((X0 = X4) \wedge ((X1 = \\ X5) \wedge ((X2 = X6) \wedge (X3 = X7)))))) \end{aligned} \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 \ X0) \Rightarrow & ((\neg v2_struct_0 \ (k6_cfundom \ X0)) \wedge \\ & ((v13_algstr_0 \ (k6_cfundom \ X0)) \wedge ((v2_rlvect_1 \ (k6_cfundom \\ & X0)) \wedge ((v3_rlvect_1 \ (k6_cfundom \ X0)) \wedge ((v4_rlvect_1 \ (k6_cfundom \\ & X0)) \wedge ((v1_clvect_1 \ (k6_cfundom \ X0)) \wedge ((v2_clvect_1 \ (k6_cfundom \\ & X0)) \wedge ((v3_clvect_1 \ (k6_cfundom \ X0)) \wedge ((v4_clvect_1 \ (k6_cfundom \\ & X0)) \wedge (v5_clvect_1 \ (k6_cfundom \ X0)))))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ X2 \ X0 \ X1) \Rightarrow (m1_subset_1 \ X2 \ X0)) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (l2_algstr_0 \ X0) \Rightarrow ((l2_struct_0 \ X0) \wedge (l1_algstr_0 \ X0)) \quad (14)$$

Assume the following.

$$\forall X0. (l1_pre_topc \ X0) \Rightarrow (l1_struct_0 \ X0) \quad (15)$$

Assume the following.

$$\forall X0. (l1_clvect_1 \ X0) \Rightarrow (l2_algstr_0 \ X0) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. (\neg v1_xboole_0 \ X1) \Rightarrow (m1_funct_2 \ (k9_funct_2 \\ X0 \ X1) \ X0 \ X1) \quad (17)$$

Assume the following.

$$m2_subset_1 \ k6_numbers \ k1_numbers \ k5_numbers \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 \ X0) \Rightarrow & ((\neg v2_struct_0 \ (k6_cfundom \ X0)) \wedge \\ & ((v1_clvect_1 \ (k6_cfundom \ X0)) \wedge (l1_clvect_1 \ (k6_cfundom \ X0)))) \end{aligned} \quad (19)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 \ X0) \Rightarrow & (m2_funct_2 \ (k4_cfundom \ X0) \ X0 \\ & k2_numbers \ (k9_funct_2 \ X0 \ k2_numbers)) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow & ((v1_funct_1 (k3_cfunclom X0)) \wedge \\ & ((v1_funct_2 (k3_cfunclom X0) (k2_zfmisc_1 k2_numbers (k9_funct_2 \\ X0 k2_numbers)) (k9_funct_2 X0 k2_numbers)) \wedge (m1_subset_1 (k3_cfunclom \\ X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k2_numbers (k9_funct_2 \\ X0 k2_numbers)) (k9_funct_2 X0 k2_numbers)))))) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow & ((v1_funct_1 (k1_cfunclom X0)) \wedge \\ & ((v1_funct_2 (k1_cfunclom X0) (k2_zfmisc_1 (k9_funct_2 X0 k2_numbers) \\ (k9_funct_2 X0 k2_numbers)) (k9_funct_2 X0 k2_numbers)) \wedge (m1_subset_1 \\ (k1_cfunclom X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k9_funct_2 \\ X0 k2_numbers) (k9_funct_2 X0 k2_numbers)) (k9_funct_2 X0 k2_numbers)))))) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow & (k7_cc0sp2 X0 = g1_clvect_1 (k6_cc0sp2 X0) (k10_csspace \\ (k6_cfunclom (u1_struct_0 X0)) (k6_cc0sp2 X0)) (k1_c0sp1 (k6_cfunclom \\ (u1_struct_0 X0)) (k6_cc0sp2 X0)) (k9_csspace (k6_cfunclom (u1_struct_0 \\ X0)) (k6_cc0sp2 X0))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (k4_struct_0 X0 = u2_struct_0 X0) \quad (25)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow & (k6_cfunclom X0 = g1_clvect_1 (k9_funct_2 \\ X0 k2_numbers) (k4_cfunclom X0) (k1_cfunclom X0) (k3_cfunclom \\ X0)) \end{aligned} \quad (26)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow & (k4_cfunclom X0 = k8_funcop_1 k1_numbers \\ & X0 k6_numbers) \end{aligned} \quad (27)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_struct_0 X0) \Rightarrow & (\forall X1. (v1_xcmplx_0 X1) \Rightarrow (k1_cc0sp2 \\ X0 X1 = k7_funcop_1 (u1_struct_0 X0) X1)) \end{aligned} \quad (28)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (29)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (30)$$

Assume the following.

$$\forall X0.(l1_clvect_1 X0) \Rightarrow ((v1_clvect_1 X0) \Rightarrow (X0 = g1_clvect_1 (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 X0) (u1_clvect_1 X0))) \quad (31)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (k4_struct_0 (k7_cc0sp2 X0) = k1_cc0sp2 X0 k6_numbers)$$