

t63_tex_2 (TM-
FRkvgm3pNw4hSncuWLMJQLfFDm661Zcd)

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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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_tdlat_3 : \iota \Rightarrow o$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_compts_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_subset_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k8_relset_1 X0 X0 (k6_partfun1 X0) X1 = X1) \quad (1)$$

Assume the following.

$$\forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow ((v1_tdlat_3 X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (v4_pre_topc X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (3)$$

Assume the following.

$$\forall X0. k6_partfun1 X0 = k4_relat_1 X0 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (\forall X2. \forall X3. (g1_pre_topc X0 X1 = g1_pre_topc X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \quad (5)$$

Assume the following.

$$\forall X0.v1_tdlat_3 (k1_compts_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k4_relat_1 X0)) \wedge (v1_funct_1 (k4_relat_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\neg v2_struct_0 (k1_compts_1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_pre_topc (k1_compts_1 X0)) \wedge (v2_pre_topc (k1_compts_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (m1_subset_1 (u1_pre_topc X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (11)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1_partfun1 (k6_partfun1 X0) X0) \wedge (m1_subset_1 (k6_partfun1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (13)$$

Assume the following.

$$\forall X0.l1_pre_topc (k1_compts_1 X0) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(l1_pre_topc X1) \Rightarrow (\forall X2. \\ ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ X0) (u1_struct_0 X1)))))) \Rightarrow ((v5_pre_topc X2 X0 X1) \Leftrightarrow (\forall X3. \\ (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow ((v4_pre_topc \\ X3 X1) \Rightarrow (v4_pre_topc (k8_relset_1 (u1_struct_0 X0) (u1_struct_0 \\ X1) X2 X3) X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.k1_compts_1 X0 = g1_pre_topc X0 (k2_subset_1 (k9_setfam_1 X0)) \quad (16)$$

Assume the following.

$$\forall X0.k2_subset_1 X0 = X0 \quad (17)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow ((v1_tdlat_3 X0) \Rightarrow (v2_pre_topc X0)) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v1_partfun1 X2 X0) \Rightarrow (v1_funct_2 X2 X0 X1)) \quad (19)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow ((v1_pre_topc X0) \Rightarrow (X0 = g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0))) \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow ((\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1)))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (v5_pre_topc X2 X0 X1))) \Rightarrow (v1_tdlat_3 X0)) \end{aligned}$$