

t2_topgrp_1
(TMUfz1cvdd74AsfzF23nXZaRJrw4f41qg1u)

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Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.k2_funct_1 (k4_relat_1 X0) = k4_relat_1 X0 \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (2)$$

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.

$$\forall X0.(v1_relat_1 (k4_relat_1 X0) \wedge ((v3_relat_2 (k4_relat_1 X0) \wedge ((v4_relat_2 (k4_relat_1 X0) \wedge (v8_relat_2 (k4_relat_1 X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k4_relat_1 X0)) \wedge ((v4_relat_1 (k4_relat_1 X0) X0) \wedge ((v1_funct_1 (k4_relat_1 X0)) \wedge (v1_partfun1 (k4_relat_1 X0) X0))) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow ((v1_funct_1 (k3_struct_0 X0)) \wedge ((v1_funct_2 (k3_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0)) \wedge (m1_subset_1 (k3_struct_0 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v3_funct_2 X2 X0 X1) \Rightarrow (k2_tops_2 X0 X1 X2 = k2_funct_1 X2)) \quad (9)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k3_struct_0 X0 = k6_partfun1 (u1_struct_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \Rightarrow (((v1_relat_2 X1) \wedge ((v1_funct_1 X1) \wedge ((v1_partfun1 X1 X0) \wedge (v1_funct_2 X1 X0 X0)))) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 X0) \wedge (v3_funct_2 X1 X0 X0)))) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v3_relat_2 X0) \wedge (v8_relat_2 X0))) \Rightarrow ((v1_relat_1 X0) \wedge (v1_relat_2 X0)) \quad (12)$$

Theorem 1

$$\forall X0.(l1_struct_0 X0) \Rightarrow (r2_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) (k2_tops_2 (u1_struct_0 X0) (u1_struct_0 X0) (k3_struct_0 X0)) (k3_struct_0 X0))$$