

t4_topalg_3

(TMPa6afYeQhdkzQD9NeWfYnNZLDrtCDfMRA)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_struct_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k8_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X1 \in X0) \Rightarrow (k1_funct_1 (k2_funcop_1 X0 X2) X1 = X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X2 X0)) \Rightarrow (k8_funcop_1 X0 X1 X2 = k2_funcop_1 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 X1 X2 X3 = k1_funct_1 X2 X3) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((l1_struct_0 X0)\wedge((\neg v2_struct_0 \\ X1)\wedge(l1_struct_0 X1))\wedge(m1_subset_1 X2 (u1_struct_0 X1)))\Rightarrow(\\ (v1_funct_1 (k6_struct_0 X0 X1 X2))\wedge((v1_funct_2 (k6_struct_0 \\ X0 X1 X2) (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 (k6_struct_0 \\ X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarski X1) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ (l1_struct_0 X1))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X1))\Rightarrow \\ (k6_struct_0 X0 X1 X2 = k8_funcop_1 (u1_struct_0 X1) (u1_struct_0 \\ X0) X2))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\forall X1. \\ ((\neg v2_struct_0 X1)\wedge(l1_struct_0 X1))\Rightarrow(\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ X1))\Rightarrow(k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) (k6_struct_0 \\ X0 X1 X3) X2 = X3)))) \end{aligned}$$