

t1_yellow13 (TM-
MgnrA7SVMN7KUcWuVVURKwhTxXGq7Rqbh)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v7_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k1_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((v7_pre_topc X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0))) \Rightarrow (v4_pre_topc (k6_domain_1 (u1_struct_0 X0) X1) X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0 : \iota \Rightarrow o. \forall X1. ((v1_finset_1 X1) \wedge ((X0 k1_xboole_0) \wedge \\ (\forall X2. \forall X3. ((X2 \in X1) \wedge ((r1_tarski X3 X1) \wedge (X0 X3)))) \Rightarrow \\ (X0 (k2_xboole_0 X3 (k1_tarski X2)))))) \Rightarrow (X0 X1) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(k4_subset_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge((\neg v1_xboole_0 X1)\wedge((v3_pre_topc X1 X0)\wedge(v4_pre_topc X1 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge(((v4_pre_topc X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\wedge((v4_pre_topc X2 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))))\Rightarrow(v4_pre_topc (k2_xboole_0 X1 X2) X0) \quad (8)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Rightarrow(m1_subset_1 X2 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow(m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(m1_subset_1 (k4_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(m1_subset_1 (k1_struct_0 X0) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (14)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k1_struct_0 X0 = k1_xboole_0) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v1_xboole_0 \\ X1)\Rightarrow(v4_pre_topc\ X1\ X0))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ X0))\Rightarrow(v1_xboole_0\ X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge((v7_pre_topc \\ X0)\wedge(l1_pre_topc\ X0))))\Rightarrow(\forall X1.((v1_finset_1\ X1)\wedge(m1_subset_1 \\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow(v4_pre_topc\ X1\ X0)) \end{aligned}$$