

t8_lopclset
(TMSZaPMsrqQtEbGisjstSP9eGd9hUxaJoGf)

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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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_lopclset : \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow (((v3_pre_topc X1 X0) \wedge (v4_pre_topc X1 X0)) \Rightarrow (X1 \in k1_lopclset \\ & X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\exists X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge ((v3_pre_topc \\ & X1 X0) \wedge (v4_pre_topc X1 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\wedge \\ & ((v3_pre_topc\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ & X0))))\Rightarrow(v4_pre_topc\ (k3_subset_1\ (u1_struct_0\ X0)\ X1)\ X0) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\wedge \\ & ((v4_pre_topc\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ & X0))))\Rightarrow(v3_pre_topc\ (k3_subset_1\ (u1_struct_0\ X0)\ X1)\ X0) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(m1_subset_1 \\ & (k3_subset_1\ X0\ X1)\ (k1_zfmisc_1\ X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(m1_subset_1 \\ & (k1_lopclset\ X0)\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(k1_lopclset \\ & X0 = ReplSep\ (toset\ (\lambda X1 : \iota.m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ & X0))))\ (\lambda X1 : \iota.(v3_pre_topc\ X1\ X0)\wedge(v4_pre_topc\ X1\ X0))\ (\\ & \lambda X1 : \iota.X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & X0))\Rightarrow(v1_xboole_0\ X1)) \end{aligned} \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc \\ & X0)))\Rightarrow(\forall X1.(m2_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ & X0))\ (k1_lopclset\ X0))\Rightarrow(m2_subset_1\ (k3_subset_1\ (u1_struct_0 \\ & X0)\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ X0))\ (k1_lopclset\ X0))) \end{aligned}$$