

t21_waybel19 (TMLMXukXHgkVskt- TFkg1ZznCfpLU56YUDuC)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m3_yellow_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_cantor_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((v4_pre_topc X1 X0) \Leftrightarrow (v3_pre_topc (k3_subset_1 \\ (u1_struct_0 X0) X1) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ ((v2_pre_topc X1) \wedge (l1_pre_topc X1)) \Rightarrow (\forall X2.(m3_yellow_9 \\ X2 X0 X1) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ X2)))) \Rightarrow (((X3 \in u1_pre_topc X0) \vee (X3 \in u1_pre_topc X1)) \Rightarrow (v3_pre_topc \\ X3 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X0 = X0 \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1_pre_topc X0) \wedge (l1_pre_topc X1)) \Rightarrow (\\ \forall X2.(m3_yellow_9 X2 X0 X1) \Rightarrow ((v2_pre_topc X2) \wedge (l1_pre_topc \\ X2))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (m1_subset_1 \\ (k3_subset_1 X0 X1) (k1_zfmisc_1 X0)) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(l1_pre_topc\ X1) \Rightarrow (\forall X2. \\
& ((v2_pre_topc\ X2) \wedge (l1_pre_topc\ X2)) \Rightarrow ((m3_yellow_9\ X2\ X0\ X1) \Leftrightarrow \\
& ((u1_struct_0\ X2 = k2_xboole_0\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)) \wedge \\
& ((v1_tops_2\ (k2_xboole_0\ (u1_pre_topc\ X0)\ (u1_pre_topc\ X1))\ X2) \wedge \\
& ((v2_cantor_1\ (k2_xboole_0\ (u1_pre_topc\ X0)\ (u1_pre_topc\ X1)) \\
& X2) \wedge (m1_subset_1\ (k2_xboole_0\ (u1_pre_topc\ X0)\ (u1_pre_topc \\
& X1))\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X2))))))))) \quad (6)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\
& (u1_struct_0\ X0))) \Rightarrow ((v3_pre_topc\ X1\ X0) \Leftrightarrow (X1 \in u1_pre_topc\ X0))) \quad (7)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1. \\
& ((v2_pre_topc\ X1) \wedge (l1_pre_topc\ X1)) \Rightarrow ((u1_struct_0\ X0 = u1_struct_0 \\
& X1) \Rightarrow (\forall X2.(m3_yellow_9\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (\forall X4.(m1_subset_1 \\
& X4\ (k1_zfmisc_1\ (u1_struct_0\ X2))) \Rightarrow (((X4 = X3) \wedge (v4_pre_topc\ X3 \\
& X0)) \Rightarrow (v4_pre_topc\ X4\ X2)))))))))
\end{aligned}$$