

t1_tsp_1
(TMN52oipuk4FexcLae2BGp8H4MDL7Q6w82G)

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Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k3_xboole_0 X0 X1) X0 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k8_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (l1_pre_topc X1) \Rightarrow ((\\ m1_pre_topc X1 X0) \Leftrightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 \\ X0)) \wedge (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow \\ ((v3_pre_topc X2 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \wedge (v3_pre_topc X3 X0) \wedge (X2 = k8_subset_1 (u1_struct_0 \\ X0) X3 (u1_struct_0 X1)))))))))) \quad (5) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_pre_topc\ X1\ X0) \Rightarrow \\ & (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow \\ & (\neg(v3_pre_topc\ X2\ X0) \wedge (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\ & (u1_struct_0\ X1))) \Rightarrow (\neg(v3_pre_topc\ X3\ X1) \wedge (X3 = k8_subset_1\ (u1_struct_0 \\ & X0)\ X2\ (u1_struct_0\ X1)))))) \end{aligned}$$