

t4_topmetr
(TMdR4x82jivaj8kSkZe5RxqAab1mZDjwi7j)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski\ X0\ (k2_xboole_0\ X0\ X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1\ X1\ (k1_zfmisc_1\ X0)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ X0))) \Rightarrow (k4_subset_1\ X0\ X1\ X2 = k2_xboole_0\ X1\ X2) \quad (2)$$

Assume the following.

$$\forall X0. (l1_pre_topc\ X0) \Rightarrow (\forall X1. (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (u1_struct_0\ (k1_pre_topc\ X0\ X1) = X1)) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1. (m1_pre_topc\ X1\ X0) \Rightarrow (\forall X2. (m1_pre_topc\ X2\ X0) \Rightarrow ((r1_tarski\ (u1_struct_0\ X1)\ (u1_struct_0\ X2)) \Rightarrow (m1_pre_topc\ X1\ X2)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1\ X1\ (k1_zfmisc_1\ X0)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ X0))) \Rightarrow (m1_subset_1\ (k4_subset_1\ X0\ X1\ X2)\ (k1_zfmisc_1\ X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((l1_pre_topc\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow ((v1_pre_topc\ (k1_pre_topc\ X0\ X1)) \wedge (m1_pre_topc\ (k1_pre_topc\ X0\ X1)\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(k4_subset_1 X0 X1 X2 = k4_subset_1 X0 X2 X1) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((m1_pre_topc (k1_pre_topc X0 X1) (k1_pre_topc X0 (k4_subset_1 (u1_struct_0 X0) X1 X2)))\wedge(m1_pre_topc (k1_pre_topc X0 X2) (k1_pre_topc X0 (k4_subset_1 (u1_struct_0 X0) X1 X2))))))) \end{aligned}$$