

t41_isomichi (TMb- BCUawR8EicEgZQ3EFSzcQLE37Ddp9aW3)

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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 $v3_isomichi : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (k2_pre_topc X0 (k1_tops_1 X0 X1) = k2_pre_topc \\ X0 (k1_tops_1 X0 (k2_pre_topc X0 (k1_tops_1 X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r1_tarski \\ (k1_tops_1 X0 (k2_pre_topc X0 (k1_tops_1 X0 X1))) (k1_tops_1 X0 \\ (k2_pre_topc X0 X1))) \wedge (r1_tarski (k1_tops_1 X0 (k2_pre_topc X0 \\ (k1_tops_1 X0 X1))) (k2_pre_topc X0 (k1_tops_1 X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (r1_tarski (k1_tops_1 \\ X0 X1) (k1_tops_1 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1_pre_topc X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Rightarrow (k1_tops_1 X0 (k1_tops_1 X0 X1) = k1_tops_1 \\ X0 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1_pre_topc X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k2_pre_topc X0 X1) (k1_zfmisc_1 \\ (u1_struct_0 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((l1_pre_topc\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow(m1_subset_1\ (k1_tops_1\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1.\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v3_isomichi\ X1\ X0)\Leftrightarrow(r1_tarski\ (k1_tops_1\ X0\ (k2_pre_topc\ X0\ X1))\ (k2_pre_topc\ X0\ (k1_tops_1\ X0\ X1))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarski\ X0\ X1)\wedge(r1_tarski\ X1\ X0)) \quad (8)$$

Theorem 1

$$\forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1.\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v3_isomichi\ X1\ X0)\Rightarrow((k1_tops_1\ X0\ (k2_pre_topc\ X0\ X1)) = k1_tops_1\ X0\ (k2_pre_topc\ X0\ (k1_tops_1\ X0\ X1)))\wedge(k2_pre_topc\ X0\ (k1_tops_1\ X0\ X1)) = k2_pre_topc\ X0\ (k1_tops_1\ X0\ (k2_pre_topc\ X0\ X1)))))$$