

t12_topdim_1

(TMHs75HNvBz91mn3MgCFyX9KDi9qbZesNQY)

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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 $v2_topdim_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topdim_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_topdim_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_topdim_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_prob_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k1_topdim_1 : \iota \Rightarrow \iota$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\
 & (\forall X2.(v1_int_1 X2) \Rightarrow (((v2_topdim_1 X1 X0) \wedge (r1_xxreal_0 \\
 & (k3_topdim_1 X0 X1) X2)) \Rightarrow ((r1_xxreal_0 (k1_real_1 np_1) X2) \wedge \\
 & (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
 & ((X3 \in X1) \Rightarrow ((v1_topdim_1 X3 X0) \wedge (r1_xxreal_0 (k2_topdim_1 X0 X3) \\
 & X2)))))) \wedge (((r1_xxreal_0 (k1_real_1 np_1) X2) \wedge (\forall X3.(\\
 & m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X3 \in X1) \Rightarrow ((v1_topdim_1 \\
 & X3 X0) \wedge (r1_xxreal_0 (k2_topdim_1 X0 X3) X2)))))) \Rightarrow ((v2_topdim_1 \\
 & X1 X0) \wedge (r1_xxreal_0 (k3_topdim_1 X0 X1) X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\
 & (v1_int_1 (k3_topdim_1 X0 X1)))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\
& (m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow \\
& ((v2_topdim_1\ X1\ X0)\Rightarrow(\forall X2.(v1_int_1\ X2)\Rightarrow((X2 = k3_topdim_1 \\
& X0\ X1)\Leftrightarrow((r1_tarski\ X1\ (k13_prob_1\ (u1_struct_0\ X0)\ k5_numbers \\
& (k9_setfam_1\ (u1_struct_0\ X0))\ (k1_topdim_1\ X0)\ (k3_real_1\ X2 \\
& np_1))))\wedge((r1_xxreal_0\ (k1_real_1\ np_1)\ X2)\wedge(\forall X3.(v1_int_1 \\
& X3)\Rightarrow(((r1_xxreal_0\ (k1_real_1\ np_1)\ X3)\wedge(r1_tarski\ X1\ (k13_prob_1 \\
& (u1_struct_0\ X0)\ k5_numbers\ (k9_setfam_1\ (u1_struct_0\ X0))\ (k1_topdim_1 \\
& X0)\ (k3_real_1\ X3\ np_1))))\Rightarrow(r1_xxreal_0\ X2\ X3)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\
& (m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow \\
& (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0 \\
& X0))))\Rightarrow(((v2_topdim_1\ X1\ X0)\wedge(r1_tarski\ X2\ X1))\Rightarrow((v2_topdim_1 \\
& X2\ X0)\wedge(r1_xxreal_0\ (k3_topdim_1\ X0\ X2)\ (k3_topdim_1\ X0\ X1))))))
\end{aligned}$$