

t44_borsuk_4

(TMTb9853pCp47NNudZSPWEQXHT5wRztR9jU)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
 & (l1_pre_topc X1)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
 & X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v1_funct_1 \\
 & (k5_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3)) \wedge ((v1_funct_2 \\
 & (k5_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) (u1_struct_0 \\
 & (k1_pre_topc X0 X3)) (u1_struct_0 X1)) \wedge (m1_subset_1 (k5_relset_1 \\
 & (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (u1_struct_0 (k1_pre_topc X0 X3)) (u1_struct_0 X1))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
 & (l1_pre_topc X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (\\
 & u1_struct_0 X0))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 \\
 & X3 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X4. \\
 & ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 (k1_pre_topc X0 \\
 & X2)) (u1_struct_0 X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (u1_struct_0 (k1_pre_topc X0 X2)) (u1_struct_0 X1)))))) \Rightarrow (((v5_pre_topc \\
 & X3 X0 X1) \wedge (X4 = k5_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X3 \\
 & X2)) \Rightarrow (v5_pre_topc X4 (k1_pre_topc X0 X2) X1))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\
& ((\neg v2_struct_0\ X1)\wedge((v2_pre_topc\ X1)\wedge(l1_pre_topc\ X1)))\Rightarrow(\forall X2. \\
& ((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ (u1_struct_0\ X0)\ (u1_struct_0 \\
& X1))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0 \\
& X0)\ (u1_struct_0\ X1))))))\Rightarrow(\forall X3.(m1_pre_topc\ X3\ X1)\Rightarrow((\\
& v5_pre_topc\ X2\ X0\ X1)\Rightarrow(\forall X4.((v1_funct_1\ X4)\wedge((v1_funct_2 \\
& X4\ (u1_struct_0\ X0)\ (u1_struct_0\ X3))\wedge(m1_subset_1\ X4\ (k1_zfmisc_1 \\
& (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X3))))))\Rightarrow((X4 = X2)\Rightarrow \\
& (v5_pre_topc\ X4\ X0\ X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1\ X2\ (\\
& k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(k5_relset_1\ X0\ X1\ X2\ X3 = k5_relat_1 \\
& X2\ X3)
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1\ X2)\wedge \\
& (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow(k2_partfun1 \\
& X0\ X1\ X2\ X3 = k5_relat_1\ X2\ X3)
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_pre_topc\ X1\ X0)\Rightarrow \\
& (l1_pre_topc\ X1))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1\ X2)\wedge \\
& (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow((v1_funct_1 \\
& (k2_partfun1\ X0\ X1\ X2\ X3))\wedge(m1_subset_1\ (k2_partfun1\ X0\ X1\ X2\ X3) \\
& (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((l1_pre_topc\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\
& (u1_struct_0\ X0))))\Rightarrow((v1_pre_topc\ (k1_pre_topc\ X0\ X1))\wedge(m1_pre_topc \\
& (k1_pre_topc\ X0\ X1)\ X0))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\
& (m1_pre_topc\ X1\ X0)\Rightarrow(v2_pre_topc\ X1))
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0\ X1)\wedge((v2_pre_topc\ X1)\wedge(l1_pre_topc\ X1)))\Rightarrow(\forall X2. \\ & ((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ (u1_struct_0\ X0)\ (u1_struct_0 \\ & X1))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0 \\ & X0)\ (u1_struct_0\ X1))))))\Rightarrow(\forall X3.((v2_pre_topc\ X3)\wedge(l1_pre_topc \\ & X3))\Rightarrow(\forall X4.(m1_subset_1\ X4\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow \\ & ((v5_pre_topc\ X2\ X0\ X1)\wedge(m1_pre_topc\ X3\ X1))\Rightarrow(\forall X5.((v1_funct_1 \\ & X5)\wedge((v1_funct_2\ X5\ (u1_struct_0\ (k1_pre_topc\ X0\ X4))\ (u1_struct_0 \\ & X3))\wedge(m1_subset_1\ X5\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0 \\ & (k1_pre_topc\ X0\ X4))\ (u1_struct_0\ X3))))))\Rightarrow((X5 = k2_partfun1 \\ & (u1_struct_0\ X0)\ (u1_struct_0\ X1)\ X2\ X4)\Rightarrow(v5_pre_topc\ X5\ (k1_pre_topc \\ & X0\ X4)\ X3)))))) \end{aligned}$$