

t14_borsuk_3

(TMT5gtBdgrDZS4SobGHvdmDahs9LSgV4YXh)

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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 $r2_borsuk_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ 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 $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_t_0topsp : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k2_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & (l1_pre_topc X1)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (((v1_compts_1 \\ & X0) \wedge ((v5_pre_topc X2 X0 X1) \wedge (k2_relset_1 (u1_struct_0 X1) X2 = \\ & k2_struct_0 X1))) \Rightarrow (v1_compts_1 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l1_pre_topc X1))) \Rightarrow ((r2_borsuk_3 X0 X1) \Leftrightarrow \\ & (r1_t_0topsp X0 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(l1_pre_topc X1) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1)))))) \Rightarrow ((v3_tops_2 X2 X0 X1) \Leftrightarrow ((k1_relset_1 \\ & (u1_struct_0 X0) X2 = k2_struct_0 X0) \wedge ((k2_relset_1 (u1_struct_0 \\ & X1) X2 = k2_struct_0 X1) \wedge ((v2_funct_1 X2) \wedge ((v5_pre_topc X2 X0 X1) \wedge \\ & (v5_pre_topc (k2_tops_2 (u1_struct_0 X0) (u1_struct_0 X1) X2) \\ & X1 X0))))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(l1_pre_topc\ X1) \Rightarrow ((\\
& \quad r1_t_0topsp\ X0\ X1) \Leftrightarrow (\exists X2.((v1_funct_1\ X2) \wedge ((v1_funct_2 \\
& \quad X2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)))))) \wedge (v3_tops_2 \\
& \quad X2\ X0\ X1)))) \\
& \tag{4}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0\ X0) \wedge ((v2_pre_topc\ X0) \wedge (l1_pre_topc \\
& \quad X0))) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge ((v2_pre_topc\ X1) \wedge (l1_pre_topc \\
& \quad X1))) \Rightarrow (((r2_borsuk_3\ X0\ X1) \wedge (v1_compts_1\ X0)) \Rightarrow (v1_compts_1 \\
& \quad X1)))
\end{aligned}$$