

l25_borsuk_3

(TMTVspnSw8cQ8KkfhjoRpQSBYPmJex82Bj1)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v1_compts_1 \\ & X0) \wedge (l1_pre_topc X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc \\ & X1) \wedge ((v1_compts_1 X1) \wedge (l1_pre_topc X1)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X1 X0)))))) \Rightarrow \\ & (\neg(m1_setfam_1 X2 (u1_struct_0 (k2_borsuk_1 X1 X0))) \wedge ((v1_tops_2 \\ & X2 (k2_borsuk_1 X1 X0)) \wedge (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X1 X0)))))) \Rightarrow (\neg(r1_tarski \\ & X3 X2) \wedge ((m1_setfam_1 X3 (u1_struct_0 (k2_borsuk_1 X1 X0))) \wedge (v1_finset_1 \\ & X3)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1.(((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \wedge \\ & ((v2_pre_topc X1) \wedge (l1_pre_topc X1))) \Rightarrow ((v1_pre_topc (k2_borsuk_1 \\ & X0 X1)) \wedge ((v2_pre_topc (k2_borsuk_1 X0 X1)) \wedge (l1_pre_topc (k2_borsuk_1 \\ & X0 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow ((v1_compts_1 X0) \Leftrightarrow (\forall X1.(\\ & m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ & (\neg(m1_setfam_1 X1 (u1_struct_0 X0)) \wedge ((v1_tops_2 X1 X0) \wedge (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ & (\neg(r1_tarski X2 X1) \wedge ((m1_setfam_1 X2 (u1_struct_0 X0)) \wedge (v1_finset_1 \\ & X2)))))))))) \end{aligned} \tag{3}$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge (v2_pre_topc X0) \wedge (v1_compts_1 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (v2_pre_topc X1) \wedge (v1_compts_1 X1) \wedge (l1_pre_topc X1))) \Rightarrow (v1_compts_1 (k2_borsuk_1 X0 X1)))$$