

t12_borsuk_1 (TMdE-
ZLHn95VnSpvPtw84PM8CbpQttg5aVwe)

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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 $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k3_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarski X1) \quad (3)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \wedge (((v2_pre_topc X1) \wedge (l1_pre_topc X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1))))) \Rightarrow (m1_subset_1 (k7_borsuk_1 X0 X1 X2) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1))))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (m1_subset_1 (k5_setfam_1 X0 X1) (k1_zfmisc_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} &\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1. \\ &((v2_pre_topc X1)\wedge(l1_pre_topc X1))\Rightarrow(\forall X2.(m1_subset_1 \\ &X2 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1))))\Rightarrow(k7_borsuk_1 \\ &X0 X1 X2 = ReplSep2 (toset (\lambda X3 : \iota.m1_subset_1 X3 (k1_zfmisc_1 \\ &(u1_struct_0 X0)))) (\lambda X3 : \iota.toset (\lambda X4 : \iota.m1_subset_1 \\ &X4 (k1_zfmisc_1 (u1_struct_0 X1)))) (\lambda X3 : \iota.\lambda X4 : \iota. \\ &(r1_tarSKI (k3_borsuk_1 X0 X1 X3 X4) X2)\wedge((v3_pre_topc X3 X0)\wedge \\ &v3_pre_topc X4 X1)) (\lambda X3 : \iota.\lambda X4 : \iota.k3_borsuk_1 X0 X1 \\ &X3 X4)))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} &\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1. \\ &((v2_pre_topc X1)\wedge(l1_pre_topc X1))\Rightarrow(\forall X2.(m1_subset_1 \\ &X2 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1))))\Rightarrow(r1_tarSKI \\ &(k5_setfam_1 (u1_struct_0 (k2_borsuk_1 X0 X1)) (k7_borsuk_1 X0 \\ &X1 X2)) X2))) \end{aligned}$$