

t34_borsuk_1 (TMVvrsQCgfun- bXkmWqmTESb7DYSaRkxcsip)

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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 $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k13_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ (m1_eqrel_1 X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3. \\ (m2_subset_1 X3 (k1_zfmisc_1 X0) X1) \Rightarrow ((X2 \in X3) \Rightarrow (X3 = k3_funct_2 \\ X0 X1 (k13_eqrel_1 X0 X1) X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ \forall X2.((\neg v1_xboole_0 X2) \wedge (m1_eqrel_1 X2 (u1_struct_0 X1))) \Rightarrow \\ (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((\neg X3 \in u1_struct_0 \\ X1) \Rightarrow (k6_domain_1 (u1_struct_0 X0) X3 \in k13_borsuk_1 X0 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0))\Rightarrow(k3_funct_2 X0 X1 X2 X3 = k1_funct_1 X2 X3) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_eqrel_1 X1 X0)\Rightarrow(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_eqrel_1 X1 X0)))\Rightarrow((v1_funct_1 (k13_eqrel_1 X0 X1))\wedge((v1_funct_2 (k13_eqrel_1 X0 X1) X0 X1)\wedge(m1_subset_1 (k13_eqrel_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\wedge(((\neg v2_struct_0 X1)\wedge(m1_pre_topc X1 X0))\wedge((\neg v1_xboole_0 X2)\wedge(m1_eqrel_1 X2 (u1_struct_0 X1))))))\Rightarrow((\neg v1_xboole_0 (k13_borsuk_1 X0 X1 X2))\wedge(m1_eqrel_1 (k13_borsuk_1 X0 X1 X2) (u1_struct_0 X0))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\wedge((\neg v1_xboole_0 X1)\wedge(m1_eqrel_1 X1 (u1_struct_0 X0))))\Rightarrow((v1_funct_1 (k12_borsuk_1 X0 X1))\wedge((v1_funct_2 (k12_borsuk_1 X0 X1) (u1_struct_0 X0) (u1_struct_0 (k11_borsuk_1 X0 X1))))\wedge((v5_pre_topc (k12_borsuk_1 X0 X1) X0 (k11_borsuk_1 X0 X1))\wedge(m1_subset_1 (k12_borsuk_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (k11_borsuk_1 X0 X1))))))) \quad (12)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\
& \forall X2.((\neg v1_xboole_0 X2) \wedge (m1_eqrel_1 X2 (u1_struct_0 X1))) \Rightarrow \\
& (k13_borsuk_1 X0 X1 X2 = k2_xboole_0 X2 (ReplSep (toset (\lambda X3 : \\
& \iota.m1_subset_1 X3 (u1_struct_0 X0))) (\lambda X3 : \iota.\neg X3 \in u1_struct_0 \\
& X1) (\lambda X3 : \iota.k6_domain_1 (u1_struct_0 X0) X3))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_eqrel_1 X1 (u1_struct_0 \\
& X0))) \Rightarrow (k12_borsuk_1 X0 X1 = k13_eqrel_1 (u1_struct_0 X0) X1))
\end{aligned} \tag{14}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow \\
& (X2 = X0))
\end{aligned} \tag{15}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\
& X0)) \Rightarrow (v1_xboole_0 X1))
\end{aligned} \tag{16}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\
& \forall X2.((\neg v1_xboole_0 X2) \wedge (m1_eqrel_1 X2 (u1_struct_0 X1))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((\neg X3 \in u1_struct_0 \\
& X1) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k11_borsuk_1 \\
& X0 (k13_borsuk_1 X0 X1 X2))) (k12_borsuk_1 X0 (k13_borsuk_1 X0 X1 \\
& X2)) X3 = k6_domain_1 (u1_struct_0 X0) X3))))))
\end{aligned}$$