

t2_borsuk_3

(TMc8rVmZqT8UbT6PJMfjYrLumEZEi5i3A91)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k6_struct_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k8_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (u1_struct_0 (k1_pre_topc X0 X1) = X1)) \end{aligned} \quad (1)$$

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.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X2 X0)) \Rightarrow (k8_funcop_1 X0 X1 X2 = k2_funcop_1 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \wedge (((\neg v2_struct_0 X1) \wedge (l1_pre_topc X1)) \wedge (m1_subset_1 X2 \\ (u1_struct_0 X1)))) \Rightarrow ((v1_funct_1 (k6_struct_0 X0 X1 X2)) \wedge ((v1_funct_2 \\ (k6_struct_0 X0 X1 X2) (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (v5_pre_topc \\ (k6_struct_0 X0 X1 X2) X0 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_tarSKI X0) \quad (6)$$

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.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \wedge \\ ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0)))))) \Rightarrow ((\neg v2_struct_0 (k1_pre_topc X0 X1)) \wedge (v1_pre_topc (k1_pre_topc \\ X0 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. \exists X1. m1_subset_1 X1 X0 \quad (9)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (10)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 \\ X2 X0)) \Rightarrow ((v1_funct_1 (k8_funcop_1 X0 X1 X2)) \wedge ((v1_funct_2 (k8_funcop_1 \\ X0 X1 X2) X1 X0) \wedge (m1_subset_1 (k8_funcop_1 X0 X1 X2) (k1_zfmisc_1 \\ (k2_zfmisc_1 X1 X0)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((l1_pre_topc X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Rightarrow ((v1_pre_topc (k1_pre_topc X0 X1)) \wedge (m1_pre_topc \\ (k1_pre_topc X0 X1) X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1_tarSKI X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (15)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& (l1_struct_0 X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow \\
& (k6_struct_0 X0 X1 X2 = k8_funcop_1 (u1_struct_0 X1) (u1_struct_0 \\
& X0) X2)))
\end{aligned} \tag{16}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\
& X1))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((v1_funct_1 \\
& (k6_struct_0 X1 X0 X2)) \wedge ((v1_funct_2 (k6_struct_0 X1 X0 X2) (u1_struct_0 \\
& X1) (u1_struct_0 (k1_pre_topc X0 (k6_domain_1 (u1_struct_0 X0) \\
& X2)))) \wedge ((v5_pre_topc (k6_struct_0 X1 X0 X2) X1 (k1_pre_topc X0 \\
& (k6_domain_1 (u1_struct_0 X0) X2))) \wedge (m1_subset_1 (k6_struct_0 \\
& X1 X0 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\
& (k1_pre_topc X0 (k6_domain_1 (u1_struct_0 X0) X2))))))))))
\end{aligned}$$