

t30_borsuk_4

(TMZHkMk35RRZnJbNJDzYYENNDXbwsacqxug)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_topmetr : \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v2_measure5 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $v2_rcomp_1 : \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_xxreal_2 : \iota \Rightarrow o$ be given. Let $v3_xxreal_2 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_xxreal_2 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v8_pre_topc : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$u1_struct_0 k17_borsuk_1 = k1_rcomp_1 k6_numbers np_1 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v2_connsp_1 X0 k5_topmetr)\wedge \\ & ((v2_compts_1 X0 k5_topmetr)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ & k5_topmetr))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 k1_numbers))\Rightarrow \\ & (((X0 = X1)\wedge(r1_tarski (k1_rcomp_1 (k5_seq_4 X1) (k4_seq_4 X1)) \\ & X1))\Rightarrow(k1_rcomp_1 (k5_seq_4 X1) (k4_seq_4 X1) = X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 k5_topmetr)))\Rightarrow((X0 = \\ & X1)\Rightarrow((v2_rcomp_1 X0)\Leftrightarrow(v4_pre_topc X1 k5_topmetr)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k5_topmetr)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 k1_numbers))\Rightarrow((X1 = \\ & X0)\Rightarrow((v4_xxreal_2 X1)\wedge(v3_xxreal_2 X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v2_connsp_1 X0 k5_topmetr)\wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k5_topmetr))))))\Rightarrow(\\ & \forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2.(v1_xreal_0 X2)\Rightarrow(((X1 \in \\ & X0)\wedge(X2 \in X0))\Rightarrow(r1_tarski (k1_rcomp_1 X1 X2) X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1)\wedge(r1_tarski X1 X2))\Rightarrow(r1_tarski X0 X2) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(m1_subset_1 X0 X1) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(((\neg v1_xboole_0 \\ & X0)\wedge(v2_measure5 X0))\Leftrightarrow(\exists X1.(m1_subset_1 X1 k1_numbers)\wedge \\ & (\exists X2.(m1_subset_1 X2 k1_numbers)\wedge((r1_xxreal_0 X1 X2)\wedge \\ & (X0 = k1_rcomp_1 X1 X2)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(((v2_rcomp_1 \\ & X0)\wedge(v3_xxreal_2 X0))\Rightarrow((X0 = k1_xboole_0)\vee(k5_seq_4 X0 \in X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow ((v2_rcomp_1 X0) \wedge (v4_xreal_2 X0)) \Rightarrow ((X0 = k1_xboole_0) \vee (k4_seq_4 X0 \in X0)) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow ((v5_xreal_2 X0) \Rightarrow ((v1_xboole_0 X0) \vee (r1_xreal_0 (k5_seq_4 X0) (k4_seq_4 X0)))) \quad (16)$$

Assume the following.

$$((v2_xreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (18)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (19)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (20)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (21)$$

Assume the following.

$$(\neg v2_struct_0 k17_borsuk_1) \wedge ((v1_pre_topc k17_borsuk_1) \wedge (v2_pre_topc k17_borsuk_1)) \quad (22)$$

Assume the following.

$$(v8_pre_topc k17_borsuk_1) \wedge (v1_compts_1 k17_borsuk_1) \quad (23)$$

Assume the following.

$$v3_membered k1_numbers \quad (24)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k1_rcomp_1 X0 X1) (k1_zfmisc_1 k1_numbers)) \quad (26)$$

Assume the following.

$$l1_pre_topc\ k17_borsuk_1 \quad (27)$$

Assume the following.

$$\forall X0.((v2_membered\ X0)\wedge((v3_xxreal_2\ X0)\wedge(v4_xxreal_2\ X0)))\Rightarrow((v2_membered\ X0)\wedge(v5_xxreal_2\ X0)) \quad (28)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (29)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge((v8_pre_topc\ X0)\wedge(l1_pre_topc\ X0))))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v2_compts_1\ X1\ X0)\Rightarrow(v4_pre_topc\ X1\ X0))) \end{aligned} \quad (30)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v3_membered\ X1)) \quad (31)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (32)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (33)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0)\wedge((v2_connsp_1\ X0\ k5_topmetr)\wedge((v2_compts_1\ X0\ k5_topmetr)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ k5_topmetr))))))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v2_measure5\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers)))) \end{aligned}$$