

t24_borsuk_4 (TMFFDRaSgKTB- WkH8t44j7Uvw8z9HnVWmqVy)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_topmetr : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_topmetr : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_connsp_1 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v8_pre_topc : \iota \Rightarrow o$ be given. Let $v3_topmetr : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v6_xxreal_2 : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topmetr : \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v1_compts_1 X0) \wedge (v4_pre_topc X1 X0)) \Rightarrow (v2_compts_1 X1 X0))) \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (((r1_xxreal_0 k6_numbers X0) \wedge (r1_xxreal_0 X0 np_1)) \Leftrightarrow (X0 \in u1_struct_0 k17_borsuk_1)) \quad (3)$$

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.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 k5_topmetr))))\Rightarrow(((\\ r1_xxreal_0 k6_numbers X0)\wedge((r1_xxreal_0 X0 X1)\wedge((r1_xxreal_0 \\ X1 np_1)\wedge(X2 = k1_rcomp_1 X0 X1))))\Rightarrow(k4_topmetr X0 X1 = k1_pre_topc \\ k5_topmetr X2)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 k5_topmetr))))\Rightarrow((X2 = \\ k1_rcomp_1 X0 X1)\Rightarrow(v4_pre_topc X2 k5_topmetr)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow((r1_xxreal_0 X0 X1)\Rightarrow(v1_connsp_1 (k4_topmetr X0 X1)))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(((r1_xxreal_0 X0 X1)\wedge(v2_xxreal_0 X0))\Rightarrow(v2_xxreal_0 X1))) \quad (10)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1)\wedge(m2_subset_1 np_1 k1_numbers k5_numbers))\wedge \\ ((m1_subset_1 np_1 k5_numbers)\wedge(m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(r1_xxreal_0 X0 X0) \quad (13)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (14)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (15)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(k1_rcomp_1 X0 X1 = k1_xxreal_1 X0 X1) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((l1_pre_topc X0)\wedge((v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))\Rightarrow((v2_struct_0 (k1_pre_topc X0 X1))\wedge(v1_pre_topc (k1_pre_topc X0 X1))) \quad (18)$$

Assume the following.

$$(v8_pre_topc k17_borsuk_1)\wedge(v1_compts_1 k17_borsuk_1) \quad (19)$$

Assume the following.

$$\forall X0.((v3_topmetr X0)\wedge(l1_struct_0 X0))\Rightarrow(v3_membered (u1_struct_0 X0)) \quad (20)$$

Assume the following.

$$v3_topmetr k17_borsuk_1 \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(v6_xxreal_2 (k1_xxreal_1 X0 X1)) \quad (22)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (23)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow((\neg v2_struct_0 (k4_topmetr X0 X1))\wedge((v1_pre_topc (k4_topmetr X0 X1))\wedge(m1_pre_topc (k4_topmetr X0 X1) k3_topmetr))) \quad (25)$$

Assume the following.

$$l1_pre_topc k17_borsuk_1 \quad (26)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v2_connsp_1\ X1\ X0)\Leftrightarrow(v1_connsp_1\ (k1_pre_topc\ X0\ X1)))) \quad (27)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow((v6_xxreal_2\ X0)\Leftrightarrow(\forall X1.(v1_xxreal_0\ X1)\Rightarrow(\forall X2.(v1_xxreal_0\ X2)\Rightarrow(((X1\in X0)\wedge(X2\in X0))\Rightarrow(r1_tarski\ (k1_xxreal_1\ X1\ X2\ X0)))))) \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0)\wedge(v1_xxreal_0\ X1))\Rightarrow((r1_xxreal_0\ X0\ X1)\vee(r1_xxreal_0\ X1\ X0)) \quad (29)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))\Rightarrow(v3_membered\ X0) \quad (30)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (31)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (32)$$

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0)\wedge(v2_xxreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xxreal_0\ X0)\wedge(\neg v3_xxreal_0\ X0))) \quad (33)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (34)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (35)$$

Assume the following.

$$\forall X0.\forall X1.(X0\in X1)\Rightarrow(\neg X1\in X0) \quad (36)$$

Theorem 1

$$\forall X0.(m1_subset_1\ X0\ (u1_struct_0\ k5_topmetr))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ k5_topmetr))\Rightarrow((r1_xxreal_0\ X0\ X1)\Rightarrow((\neg v1_xboole_0\ (k1_rcomp_1\ X0\ X1))\wedge((v2_connsp_1\ (k1_rcomp_1\ X0\ X1)\ k5_topmetr)\wedge((v2_compts_1\ (k1_rcomp_1\ X0\ X1)\ k5_topmetr)\wedge(m1_subset_1\ (k1_rcomp_1\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ k5_topmetr))))))))))$$