

t45_borsuk_4 (TMMyfstdg-
WFjBb7KfHy4awndXEGV3C5WDPUm)

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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 $k5_topmetr : \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ 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 $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v6_xxreal_2 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (((r1_xxreal_0 k6_numbers X0) \wedge (r1_xxreal_0 X0 np_1)) \Leftrightarrow (X0 \in u1_struct_0 k17_borsuk_1)) \quad (2)$$

Assume the following.

$$u1_struct_0 k17_borsuk_1 = k1_rcomp_1 k6_numbers np_1 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 k5_topmetr)))\Rightarrow((X2 = k1_rcomp_1 X0 X1)\Rightarrow(v4_pre_topc X2 k5_topmetr)))))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(\forall X2.(v1_xxreal_0 X2)\Rightarrow(\forall X3.(v1_xxreal_0 X3)\Rightarrow(((r1_xxreal_0 X0 X1)\wedge(r1_xxreal_0 X2 X3))\Rightarrow(k6_subset_1 (k1_xxreal_1 X0 X3) (k2_xboole_0 (k1_xxreal_1 X0 X1) (k1_xxreal_1 X2 X3)) = k4_xxreal_1 X1 X2)))))) \quad (7)$$

Assume the following.

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

Assume the following.

$$((v2_xxreal_0 np_1)\wedge(m2_subset_1 np_1 k1_numbers k5_numbers))\wedge ((m1_subset_1 np_1 k5_numbers)\wedge(m1_subset_1 np_1 k1_numbers)) \quad (9)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (10)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (11)$$

Assume the following.

$$r1_xxreal_0 np_0 np_1 \quad (12)$$

Assume the following.

$$r1_xxreal_0 np_0 np_0 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (14)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (15)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(k4_subset_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(k2_rcomp_1 X0 X1 = k4_xxreal_1 X0 X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(k1_rcomp_1 X0 X1 = k1_xxreal_1 X0 X1) \quad (19)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge(v1_xxreal_0 X0) \quad (20)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge((v1_xcmplx_0 X0)\wedge((v1_xxreal_0 X0)\wedge(v1_xreal_0 X0))) \quad (21)$$

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.

$$\forall X0.\forall X1.\forall X2.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge(((v4_pre_topc X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\wedge((v4_pre_topc X2 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))))\Rightarrow(v4_pre_topc (k2_xboole_0 X1 X2) X0) \quad (23)$$

Assume the following.

$$v3_membered k1_numbers \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge((v4_pre_topc X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(v3_pre_topc (k3_subset_1 (u1_struct_0 X0) X1) X0) \quad (25)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (26)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(v6_xxreal_2 (k1_xxreal_1 X0 X1)) \quad (27)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 X0)))\Rightarrow(m1_subset_1 (k4_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (29)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k1_rcomp_1 X0 X1) (k1_zfmisc_1 k1_numbers)) \quad (30)$$

Assume the following.

$$l1_pre_topc k17_borsuk_1 \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(k3_subset_1 X0 X1 = k4_xboole_0 X0 X1) \quad (32)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow((v6_xxreal_2 X0)\Leftrightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(\forall X2.(v1_xxreal_0 X2)\Rightarrow(((X1 \in X0)\wedge(X2 \in X0))\Rightarrow(r1_tarski (k1_xxreal_1 X1 X2) X0)))))) \quad (33)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (34)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v2_membered X0) \quad (35)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v3_membered X1)) \quad (36)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v2_membered X1)) \quad (37)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (38)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xreal_0 X1)) \quad (39)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xxreal_0 X1)) \quad (40)$$

Theorem 1

$$\begin{aligned} &\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k5_topmetr)))\Rightarrow \\ &\quad (\forall X1.(m1_subset_1 X1 (u1_struct_0 k5_topmetr))\Rightarrow(\forall X2. \\ &(m1_subset_1 X2 (u1_struct_0 k5_topmetr))\Rightarrow((X0 = k2_rcomp_1 X1 \\ &\quad X2)\Rightarrow(v3_pre_topc X0 k5_topmetr)))) \end{aligned}$$