

t6_borsuk_6 (TMWL- rheD6h7YDMDBgMayshPxL5ZgN7p74SP)

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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 $k8_real.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_xreal.0 : \iota \Rightarrow o$ be given. Let $r1_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $v2_xxreal.0 : \iota \Rightarrow o$ be given. Let $v3_xxreal.0 : \iota \Rightarrow o$ be given. Let $k1_xboole.0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k3_xcmplx.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ 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 $v1_xcmplx.0 : \iota \Rightarrow o$ be given. Let $v1_xxreal.0 : \iota \Rightarrow o$ be given. Let $k1_xreal.1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k7_xcmplx.0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal.0 X0) \Rightarrow (\forall X1.(v1_xreal.0 X1) \Rightarrow ((r1_xxreal.0 X0 X1) \Rightarrow ((v1_xboole.0 X0) \vee ((v2_xxreal.0 X1) \vee (v3_xxreal.0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole.0 X0) \Rightarrow (X0 = k1_xboole.0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal.0 X0) \Rightarrow (\forall X1.(v1_xreal.0 X1) \Rightarrow (\forall X2.(v1_xreal.0 X2) \Rightarrow (((r1_xxreal.0 X0 X1) \wedge (r1_xxreal.0 k6_numbers X2)) \Rightarrow (r1_xxreal.0 (k3_xcmplx.0 X0 X2) (k3_xcmplx.0 X1 X2)))))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset.1 X1 (k1_zfmisc.1 X2)) \wedge (v1_xboole.0 X2)) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal.0 X0) \Rightarrow (((r1_xxreal.0 k6_numbers X0) \wedge (r1_xxreal.0 X0 np_1)) \Leftrightarrow (X0 \in u1_struct.0 k17_borsuk.1)) \quad (5)$$

Assume the following.

$$u1_struct_0 \ k17_borsuk_1 = k1_rcomp_1 \ k6_numbers \ np_1 \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ X1)) \Leftrightarrow (r1_tarski \ X0 \ X1) \quad (7)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (k3_xcmplx_0 \ np_1 \ X0 = X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. (v1_xxreal_0 \ X0) \Rightarrow (\forall X1. (v1_xxreal_0 \ X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 \ X2) \Rightarrow (((r1_xxreal_0 \ X0 \ X1) \wedge (r1_xxreal_0 \ X1 \ X2)) \Rightarrow \\ (r1_xxreal_0 \ X0 \ X2)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 \ X0 \ X1) \Rightarrow ((v1_xboole_0 \ X1) \vee (X0 \in X1)) \quad (10)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (\forall X1. (v1_xreal_0 \ X1) \Rightarrow (((r1_xxreal_0 \ X0 \ X1) \wedge (v3_xxreal_0 \ X1)) \Rightarrow (v3_xxreal_0 \ X0))) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. (v1_xxreal_0 \ X0) \Rightarrow (\forall X1. (v1_xxreal_0 \ X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 \ X2) \Rightarrow ((X0 \in k1_xxreal_1 \ X1 \ X2) \Leftrightarrow ((r1_xxreal_0 \ X1 \ X0) \wedge \\ (r1_xxreal_0 \ X0 \ X2)))))) \end{aligned} \quad (12)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 \ X0 \ X1) \quad (14)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (\forall X1. (v1_xreal_0 \ X1) \Rightarrow (((r1_xxreal_0 \ X0 \ X1) \wedge (v2_xxreal_0 \ X0)) \Rightarrow (v2_xxreal_0 \ X1))) \quad (15)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (17)$$

Assume the following.

$$(m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \ k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \quad (18)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (19)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_2 = np_0 \quad (20)$$

Assume the following.

$$r1_xxreal_0 \ (k7_xcmplx_0 \ np_1 \ np_2) \ np_1 \quad (21)$$

Assume the following.

$$r1_xxreal_0 \ np_1 \ np_2 \quad (22)$$

Assume the following.

$$r1_xxreal_0 \ np_1 \ np_1 \quad (23)$$

Assume the following.

$$r1_xxreal_0 \ np_0 \ (k7_xcmplx_0 \ np_1 \ np_2) \quad (24)$$

Assume the following.

$$r1_xxreal_0 \ np_0 \ np_2 \quad (25)$$

Assume the following.

$$r1_xxreal_0 \ np_0 \ np_1 \quad (26)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski \ X0 \ X0 \quad (27)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (k8_real_1 \ X0 \ X1 = k3_xcmplx_0 \ X0 \ X1) \quad (28)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (29)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(k1_rcomp_1 X0 X1 = k1_xxreal_1 X0 X1) \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k10_real_1 X0 X1 = k7_xcmplx_0 X0 X1) \quad (32)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(v1_xreal_0 (k3_xcmplx_0 X0 X1)) \quad (33)$$

Assume the following.

$$\forall X0.((v3_topmetr X0)\wedge(l1_struct_0 X0))\Rightarrow(v3_membered (u1_struct_0 X0)) \quad (34)$$

Assume the following.

$$v3_topmetr k17_borsuk_1 \quad (35)$$

Assume the following.

$$v3_membered k1_numbers \quad (36)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v3_xxreal_0 X0)\wedge(v1_xreal_0 X0))\wedge ((\neg v3_xxreal_0 X1)\wedge(v1_xreal_0 X1)))\Rightarrow(\neg v3_xxreal_0 (k3_xcmplx_0 X0 X1)) \quad (37)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (38)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k8_real_1 X0 X1) k1_numbers) \quad (39)$$

Assume the following.

$$l1_pre_topc k17_borsuk_1 \quad (40)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k10_real_1 X0 X1) k1_numbers) \quad (41)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota.v1_xboole_0 X0) \quad (42)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (43)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (44)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v3_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v2_xxreal_0 X0))) \quad (45)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (46)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \quad (47)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (48)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (49)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow (v1_xreal_0 X1)) \quad (50)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k5_topmetr))\Rightarrow(m1_subset_1 (k8_real_1 (k10_real_1 np_1 np_2) X0) (u1_struct_0 k5_topmetr))$$