

t70_borsuk_6
(TMHGL2pQyaR5U9f8wTEhR3E2ftEfcE9AjbP)

October 27, 2020

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 $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k6_borsuk_6 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $k4_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ 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 $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k6_xcmplx_0 \\ & X0 X2) (k6_xcmplx_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 \\ & X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 k6_numbers = X0) \quad (4)$$

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.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k5_topmetr)) \Rightarrow ((r1_xxreal_0 X0 (k10_real_1 np_1 np_2)) \Rightarrow (m1_subset_1 (k8_real_1 np_2 X0) (u1_struct_0 k5_topmetr))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (v3_xxreal_0 X1)) \Rightarrow (v3_xxreal_0 X0))) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (v2_xxreal_0 X0)) \Rightarrow (v2_xxreal_0 X1))) \quad (11)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X2 X3)) \Rightarrow (r1_xxreal_0 (k6_xcmplx_0 X0 X3) (k6_xcmplx_0 X1 X2))))))) \quad (13)$$

Assume the following.

$$((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \quad (14)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (15)$$

Assume the following.

$$(m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \ k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \quad (16)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (17)$$

Assume the following.

$$k4_xcmplx_0 \ (k7_xcmplx_0 \ (k4_xcmplx_0 \ np_1) \ np_2) = k7_xcmplx_0 \ np_1 \ np_2 \quad (18)$$

Assume the following.

$$k4_xcmplx_0 \ (k7_xcmplx_0 \ np_1 \ np_2) = k7_xcmplx_0 \ (k4_xcmplx_0 \ np_1) \ np_2 \quad (19)$$

Assume the following.

$$k7_xcmplx_0 \ np_1 \ (k4_xcmplx_0 \ np_2) = k7_xcmplx_0 \ (k4_xcmplx_0 \ np_1) \ np_2 \quad (20)$$

Assume the following.

$$k6_xcmplx_0 \ np_2 \ np_1 = np_1 \quad (21)$$

Assume the following.

$$k6_xcmplx_0 \ np_1 \ np_1 = np_0 \quad (22)$$

Assume the following.

$$r1_xxreal_0 \ (k7_xcmplx_0 \ np_1 \ np_2) \ np_1 \quad (23)$$

Assume the following.

$$r1_xxreal_0 \ np_1 \ np_1 \quad (24)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k9_real_1 \ X0 \ X1 = k6_xcmplx_0 \ X0 \ X1) \quad (25)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (26)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (27)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (28)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\ & X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\wedge(((\neg v2_struct_0 X1)\wedge \\ & ((v2_pre_topc X1)\wedge(l1_pre_topc X1)))\wedge((m1_subset_1 X2 (u1_struct_0 \\ & X0))\wedge(m1_subset_1 X3 (u1_struct_0 X1))))))\Rightarrow(k4_borsuk_1 X0 X1 \\ & X2 X3 = k4_tarSKI X2 X3) \end{aligned} \quad (29)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k10_real_1 X0 X1 = k7_xcmplx_0 X0 X1) \quad (30)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge(v1_xxreal_0 X0) \quad (31)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc \\ & X0)))\Rightarrow(\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))\wedge((\neg v1_xboole_0 X1)\wedge(v2_compts_1 X1 X0))) \end{aligned} \quad (32)$$

Assume the following.

$$(\neg v2_struct_0 k17_borsuk_1)\wedge((v1_pre_topc k17_borsuk_1)\wedge(v2_pre_topc k17_borsuk_1)) \quad (33)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(v1_xreal_0 (k7_xcmplx_0 X0 X1)) \quad (34)$$

Assume the following.

$$\forall X0.((v3_topmetr X0)\wedge(l1_struct_0 X0))\Rightarrow(v3_membered (u1_struct_0 X0)) \quad (35)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge(v1_xreal_0 (k4_xcmplx_0 X0))) \quad (36)$$

Assume the following.

$$v3_topmetr\ k17_borsuk_1 \quad (37)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_xxreal_0\ X0)\wedge(v1_xxreal_0\ X0))\wedge \\ & ((\neg v3_xxreal_0\ X1)\wedge(v1_xxreal_0\ X1)))\Rightarrow(\neg v2_xxreal_0\ (k3_xcmplx_0 \\ & X0\ X1)) \end{aligned} \quad (38)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(l1_struct_0\ X0) \quad (39)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1\ X0\ k1_numbers)\wedge(v1_xxreal_0 \\ & X1))\Rightarrow(m1_subset_1\ (k8_real_1\ X0\ X1)\ k1_numbers) \end{aligned} \quad (40)$$

Assume the following.

$$\begin{aligned} & m1_subset_1\ k6_borsuk_6\ (k1_zfmisc_1\ (u1_struct_0\ (k2_borsuk_1 \\ & k5_topmetr\ k5_topmetr))) \end{aligned} \quad (41)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (42)$$

Assume the following.

$$l1_pre_topc\ k17_borsuk_1 \quad (43)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ (k2_borsuk_1 \\ & k5_topmetr\ k5_topmetr))))\Rightarrow((X0 = k6_borsuk_6)\Leftrightarrow(\forall X1.(\\ & X1 \in X0)\Leftrightarrow(\exists X2.(m1_subset_1\ X2\ (u1_struct_0\ k5_topmetr))\wedge \\ & (\exists X3.(m1_subset_1\ X3\ (u1_struct_0\ k5_topmetr))\wedge((X1 = \\ & k4_borsuk_1\ k5_topmetr\ k5_topmetr\ X2\ X3)\wedge(r1_xxreal_0\ X3\ (k9_real_1 \\ & np_1\ (k8_real_1\ np_2\ X2)))))))) \end{aligned} \quad (44)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski\ X0\ X1 = k2_tarski\ (k2_tarski\ X0\ X1)\ (k1_tarski\ X0) \quad (45)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xxreal_0\ X0)\wedge(v1_xxreal_0\ X1))\Rightarrow(\\ & (r1_xxreal_0\ X0\ X1)\vee(r1_xxreal_0\ X1\ X0)) \end{aligned} \quad (46)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))\Rightarrow(v3_membered\ X0) \quad (47)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v3_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v2_xxreal_0 X0))) \quad (48)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (49)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X0))) \quad (50)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (51)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (52)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (53)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (54)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k5_topmetr)) \Rightarrow ((r1_xxreal_0 X0 (k10_real_1 np_1 np_2)) \Rightarrow (k4_tarski X0 k6_numbers \in k6_borsuk_6))$$