

t4_borsuk_6 (TMGb- nDu8bU5PkZfoWnbcUHoUHxbLmojDFig)

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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 $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k17_borsuk_1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ 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 $v3_topmetr : \iota \Rightarrow o$ 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. Let $v1_membered : \iota \Rightarrow o$ 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.

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

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 k6_numbers \\ & X2)) \Rightarrow (r1_xxreal_0 (k3_xcmplx_0 X0 X2) (k3_xcmplx_0 X1 X2)))))) \end{aligned} \quad (4)$$

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.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X0) \wedge (v3_xxreal_0 X1)))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 X0 (k3_xcmplx_0 X1 X2)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k2_xcmplx_0 X0 X1) X2 = k2_xcmplx_0 (k3_xcmplx_0 X0 X2) (k3_xcmplx_0 X1 X2)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 X0 (k7_xcmplx_0 X1 X2) = k7_xcmplx_0 (k3_xcmplx_0 X0 X1) X2) \quad (13)$$

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.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 (k4_xcmplx_0 np_1) = k4_xcmplx_0 X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \quad (17)$$

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.

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

Assume the following.

$$k4_xcmplx_0 (k7_xcmplx_0 np_1 np_2) = k7_xcmplx_0 (k4_xcmplx_0 np_1) np_2 \quad (21)$$

Assume the following.

$$k3_xcmplx_0 (k7_xcmplx_0 np_1 np_2) np_2 = np_1 \quad (22)$$

Assume the following.

$$k3_xcmplx_0 np_1 np_2 = np_2 \quad (23)$$

Assume the following.

$$k3_xcmplx_0 np_0 np_2 = np_0 \quad (24)$$

Assume the following.

$$k3_xcmplx_0 np_0 np_1 = np_0 \quad (25)$$

Assume the following.

$$k7_xcmplx_0 np_1 (k7_xcmplx_0 np_1 np_2) = np_2 \quad (26)$$

Assume the following.

$$k7_xcmplx_0\ np_1\ (k4_xcmplx_0\ np_2) = k7_xcmplx_0\ (k4_xcmplx_0\ np_1)\ np_2 \quad (27)$$

Assume the following.

$$k6_xcmplx_0\ np_2\ np_1 = np_1 \quad (28)$$

Assume the following.

$$k6_xcmplx_0\ np_1\ np_2 = k4_xcmplx_0\ np_1 \quad (29)$$

Assume the following.

$$k6_xcmplx_0\ np_1\ np_1 = np_0 \quad (30)$$

Assume the following.

$$r1_xxreal_0\ np_0\ np_2 \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1\ X0\ k1_numbers)\wedge(v1_xreal_0\ X1))\Rightarrow(k9_real_1\ X0\ X1 = k6_xcmplx_0\ X0\ X1) \quad (32)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1\ X0\ k1_numbers)\wedge(v1_xreal_0\ X1))\Rightarrow(k8_real_1\ X0\ X1 = k3_xcmplx_0\ X0\ X1) \quad (33)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (34)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (35)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1\ X0\ k1_numbers)\wedge(v1_xreal_0\ X1))\Rightarrow(k10_real_1\ X0\ X1 = k7_xcmplx_0\ X0\ X1) \quad (36)$$

Assume the following.

$$\exists X0.(v1_xboole_0\ X0)\wedge(v1_xxreal_0\ X0) \quad (37)$$

Assume the following.

$$\exists X0.(v1_xboole_0\ X0)\wedge((v1_xcmplx_0\ X0)\wedge((v1_xxreal_0\ X0)\wedge(v1_xreal_0\ X0))) \quad (38)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (39)$$

Assume the following.

$$(\neg v2_struct_0 k17_borsuk_1) \wedge ((v1_pre_topc k17_borsuk_1) \wedge (v2_pre_topc k17_borsuk_1)) \quad (40)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k7_xcmplx_0 X0 X1)) \quad (41)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k6_xcmplx_0 X0 X1)) \quad (42)$$

Assume the following.

$$\forall X0.((v3_topmetr X0) \wedge (l1_struct_0 X0)) \Rightarrow (v3_membered (u1_struct_0 X0)) \quad (43)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (44)$$

Assume the following.

$$v3_topmetr k17_borsuk_1 \quad (45)$$

Assume the following.

$$v3_membered k1_numbers \quad (46)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (47)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (48)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k8_real_1 X0 X1) k1_numbers) \quad (49)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xcmplx_0 (k4_xcmplx_0 X0)) \quad (50)$$

Assume the following.

$$l1_pre_topc \ k17_borsuk_1 \quad (51)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (m1_subset_1 \ (k10_real_1 \ X0 \ X1) \ k1_numbers) \quad (52)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k8_real_1 \ X0 \ X1 = k8_real_1 \ X1 \ X0) \quad (53)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 \ X0) \wedge (v1_xcmplx_0 \ X1)) \Rightarrow (k3_xcmplx_0 \ X0 \ X1 = k3_xcmplx_0 \ X1 \ X0) \quad (54)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 \ X0) \wedge (v1_xcmplx_0 \ X1)) \Rightarrow (k2_xcmplx_0 \ X0 \ X1 = k2_xcmplx_0 \ X1 \ X0) \quad (55)$$

Assume the following.

$$\forall X0. ((v1_xxreal_0 \ X0) \wedge (v3_xxreal_0 \ X0)) \Rightarrow ((\neg v1_xboole_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v2_xxreal_0 \ X0))) \quad (56)$$

Assume the following.

$$\forall X0. (v3_membered \ X0) \Rightarrow (v1_membered \ X0) \quad (57)$$

Assume the following.

$$\forall X0. ((v1_xxreal_0 \ X0) \wedge (v2_xxreal_0 \ X0)) \Rightarrow ((\neg v1_xboole_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v3_xxreal_0 \ X0))) \quad (58)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (v1_xcmplx_0 \ X0) \quad (59)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (60)$$

Assume the following.

$$\forall X0. (v3_membered \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ X0) \Rightarrow (v1_xreal_0 \ X1)) \quad (61)$$

Assume the following.

$$\forall X0. (v1_membered \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ X0) \Rightarrow (v1_xcmplx_0 \ X1)) \quad (62)$$

Theorem 1

$$\forall X0. (m1_subset_1 \ X0 \ (u1_struct_0 \ k5_topmetr)) \Rightarrow ((r1_xxreal_0 \ (k10_real_1 \ np_1 \ np_2) \ X0) \Rightarrow (m1_subset_1 \ (k9_real_1 \ (k8_real_1 \ np_2 \ X0) \ np_1) \ (u1_struct_0 \ k5_topmetr)))$$