

## t69\_borsuk\_6

(TMbhXngKVFApqcF3LtXLnjhbFNN8Ykmifwc)

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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  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k8\_borsuk\_6 : \iota$  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  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_borsuk\_1 : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $np\_0 : \iota$  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  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v1\_pre\_topc : \iota \Rightarrow o$  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  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 k6\_numbers \\ & X2)) \Rightarrow (r1\_xxreal\_0 (k3\_xcmplx\_0 X0 X2) (k3\_xcmplx\_0 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (((r1\_xxreal\_0 k6\_numbers X0) \wedge (r1\_xxreal\_0 X0 np\_1)) \Leftrightarrow (X0 \in u1\_struct\_0 k17\_borsuk\_1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (v2\_xxreal\_0 X0)) \Rightarrow (v2\_xxreal\_0 X1))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(v1\_xreal\_0 X3) \Rightarrow (((r1\_xxreal\_0 \\ & X0 X1) \wedge (r1\_xxreal\_0 X2 X3)) \Rightarrow (r1\_xxreal\_0 (k6\_xcmplx\_0 X0 X3) ( \\ & k6\_xcmplx\_0 X1 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \quad (9)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (10)$$

Assume the following.

$$k4\_xcmplx\_0 np\_0 = np\_0 \quad (11)$$

Assume the following.

$$k3\_xcmplx\_0 (k7\_xcmplx\_0 np\_1 np\_2) np\_2 = np\_1 \quad (12)$$

Assume the following.

$$k6\_xcmplx\_0 np\_1 np\_1 = np\_0 \quad (13)$$

Assume the following.

$$r1\_xxreal\_0 np\_1 np\_1 \quad (14)$$

Assume the following.

$$r1\_xxreal\_0 np\_0 np\_1 \quad (15)$$

Assume the following.

$$r1\_xxreal\_0 np\_0 np\_0 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k9\_real\_1 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k8\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (18)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (19)$$

Assume the following.

$$k5\_topmetr = k17\_borsuk\_1 \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0 \\ & X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0)))\wedge(((\neg v2\_struct\_0 X1)\wedge \\ & ((v2\_pre\_topc X1)\wedge(l1\_pre\_topc X1)))\wedge((m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0))\wedge(m1\_subset\_1 X3 (u1\_struct\_0 X1))))))\Rightarrow(k4\_borsuk\_1 X0 X1 \\ & X2 X3 = k4\_tarski X2 X3) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k10\_real\_1 X0 X1 = k7\_xcmplx\_0 X0 X1) \quad (22)$$

Assume the following.

$$(\neg v2\_struct\_0 k17\_borsuk\_1)\wedge((v1\_pre\_topc k17\_borsuk\_1)\wedge(v2\_pre\_topc k17\_borsuk\_1)) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(v1\_xreal\_0 (k7\_xcmplx\_0 X0 X1)) \quad (24)$$

Assume the following.

$$\forall X0.((v3\_topmetr X0)\wedge(l1\_struct\_0 X0))\Rightarrow(v3\_membered (u1\_struct\_0 X0)) \quad (25)$$

Assume the following.

$$v3\_topmetr k17\_borsuk\_1 \quad (26)$$

Assume the following.

$$\forall X0.((\neg v3\_xxreal\_0 X0)\wedge(v1\_xreal\_0 X0))\Rightarrow((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0))\wedge(\neg v2\_xxreal\_0 (k4\_xcmplx\_0 X0))) \quad (27)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(l1\_struct\_0\ X0) \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k8\_real\_1\ X0\ X1)\ k1\_numbers) \quad (29)$$

Assume the following.

$$m1\_subset\_1\ k8\_borsuk\_6\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ k5\_topmetr\ k5\_topmetr))) \quad (30)$$

Assume the following.

$$l1\_pre\_topc\ k17\_borsuk\_1 \quad (31)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k2\_borsuk\_1\ k5\_topmetr\ k5\_topmetr))))\Rightarrow((X0 = k8\_borsuk\_6)\Leftrightarrow(\forall X1.( \\ X1 \in X0)\Leftrightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ k5\_topmetr))\wedge \\ (\exists X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ k5\_topmetr))\wedge((X1 = \\ k4\_borsuk\_1\ k5\_topmetr\ k5\_topmetr\ X2\ X3)\wedge(r1\_xxreal\_0\ X3\ (k9\_real\_1 \\ (k8\_real\_1\ np\_2\ X2)\ np\_1))))))) \end{aligned} \quad (32)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow( \\ (r1\_xxreal\_0\ X0\ X1)\vee(r1\_xxreal\_0\ X1\ X0)) \quad (33)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow( \\ k3\_xcmplx\_0\ X0\ X1 = k3\_xcmplx\_0\ X1\ X0) \quad (34)$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0\ X0)\wedge(v3\_xxreal\_0\ X0))\Rightarrow((\neg v1\_xboole\_0 \\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(\neg v2\_xxreal\_0\ X0))) \quad (35)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \quad (36)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \quad (37)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \quad (38)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow \\ (v1\_xreal\_0\ X1)) \quad (39)$$

**Theorem 1**

$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k5\_topmetr)) \Rightarrow ((r1\_xreal\_0$   
 $(k10\_real\_1 np\_1 np\_2) X0) \Rightarrow (k4\_tarSKI X0 k6\_numbers \in k8\_borsuk\_6))$