

## t67\_borsuk\_6

(TMSStxPBP4W1QRKi6Bqq4m6xMbUdYJWJbo5)

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Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k6\_numbers : \iota$  be given. Let  $k7\_borsuk\_6 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k17\_borsuk\_1 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k5\_topmetr : \iota$  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  $v1\_xcmplx\_0 : \iota \Rightarrow o$  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.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 X1) \wedge ((\neg v3\_xxreal\_0 X1) \wedge (\neg v2\_xxreal\_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$(m2\_subset\_1 \ np\_0 \ k1\_numbers \ k5\_numbers) \wedge ((m1\_subset\_1 \ np\_0 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_0 \ k1\_numbers)) \quad (7)$$

Assume the following.

$$v1\_xboole\_0 \ np\_0 \quad (8)$$

Assume the following.

$$k4\_xcmplx\_0 \ (k7\_xcmplx\_0 \ np\_1 \ np\_2) = k7\_xcmplx\_0 \ (k4\_xcmplx\_0 \ np\_1) \ np\_2 \quad (9)$$

Assume the following.

$$k4\_xcmplx\_0 \ np\_0 = np\_0 \quad (10)$$

Assume the following.

$$k3\_xcmplx\_0 \ (k7\_xcmplx\_0 \ np\_1 \ np\_2) \ np\_2 = np\_1 \quad (11)$$

Assume the following.

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

Assume the following.

$$k7\_xcmplx\_0 \ np\_1 \ (k4\_xcmplx\_0 \ np\_2) = k7\_xcmplx\_0 \ (k4\_xcmplx\_0 \ np\_1) \ np\_2 \quad (13)$$

Assume the following.

$$k6\_xcmplx\_0 \ (k4\_xcmplx\_0 \ np\_1) \ np\_1 = k4\_xcmplx\_0 \ np\_2 \quad (14)$$

Assume the following.

$$k6\_xcmplx\_0 \ np\_1 \ np\_1 = np\_0 \quad (15)$$

Assume the following.

$$k6\_xcmplx\_0 \ np\_0 \ (k7\_xcmplx\_0 \ (k4\_xcmplx\_0 \ np\_1) \ np\_2) = k7\_xcmplx\_0 \ np\_1 \ np\_2 \quad (16)$$

Assume the following.

$$r1\_xxreal\_0 \ (k7\_xcmplx\_0 \ np\_1 \ np\_2) \ np\_1 \quad (17)$$

Assume the following.

$$\neg r1\_xreal\_0 (k7\_xcmplx\_0 np\_1 np\_2) np\_0 \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k9\_real\_1 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k8\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (20)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (21)$$

Assume the following.

$$k5\_topmetr = k17\_borsuk\_1 \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0 \\ & X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0)))\wedge(((\neg v2\_struct\_0 X1)\wedge \\ & ((v2\_pre\_topc X1)\wedge(l1\_pre\_topc X1)))\wedge((m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0))\wedge(m1\_subset\_1 X3 (u1\_struct\_0 X1))))))\Rightarrow(k4\_borsuk\_1 X0 X1 \\ & X2 X3 = k4\_tarski X2 X3) \end{aligned} \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k10\_real\_1 X0 X1 = k7\_xcmplx\_0 X0 X1) \quad (24)$$

Assume the following.

$$(\neg v2\_struct\_0 k17\_borsuk\_1)\wedge((v1\_pre\_topc k17\_borsuk\_1)\wedge(v2\_pre\_topc k17\_borsuk\_1)) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(v1\_xreal\_0 (k7\_xcmplx\_0 X0 X1)) \quad (26)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(v1\_xreal\_0 (k6\_xcmplx\_0 X0 X1)) \quad (27)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge (v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \quad (28)$$

Assume the following.

$$\forall X0.((\neg v3\_xxreal\_0 X0) \wedge (v1\_xreal\_0 X0)) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge (\neg v2\_xxreal\_0 (k4\_xcmplx\_0 X0))) \quad (29)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k8\_real\_1 X0 X1) k1\_numbers) \quad (30)$$

Assume the following.

$$m1\_subset\_1 k7\_borsuk\_6 (k1\_zfmisc\_1 (u1\_struct\_0 (k2\_borsuk\_1 k5\_topmetr k5\_topmetr))) \quad (31)$$

Assume the following.

$$l1\_pre\_topc k17\_borsuk\_1 \quad (32)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k2\_borsuk\_1 \\ k5\_topmetr k5\_topmetr)))) \Rightarrow ((X0 = k7\_borsuk\_6) \Leftrightarrow (\forall X1.( \\ X1 \in X0) \Leftrightarrow (\exists X2.(m1\_subset\_1 X2 (u1\_struct\_0 k5\_topmetr)) \wedge \\ (\exists X3.(m1\_subset\_1 X3 (u1\_struct\_0 k5\_topmetr)) \wedge ((X1 = \\ k4\_borsuk\_1 k5\_topmetr k5\_topmetr X2 X3) \wedge ((r1\_xxreal\_0 (k9\_real\_1 \\ np\_1 (k8\_real\_1 np\_2 X2)) X3) \wedge (r1\_xxreal\_0 (k9\_real\_1 (k8\_real\_1 \\ np\_2 X2) np\_1) X3))))))) \end{aligned} \quad (33)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k8\_real\_1 X0 X1 = k8\_real\_1 X1 X0) \quad (34)$$

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.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (37)$$

**Theorem 1**  $k4\_tarski (k10\_real\_1 np\_1 np\_2) k6\_numbers \in k7\_borsuk\_6.$