

## t61\_borsuk\_6

(TMJNT1cZzDppmYRrgbetJbRG4nRPQEmBmum)

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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  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k6\_borsuk\_6 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k17\_borsuk\_1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $np\_2 : \iota$  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  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k4\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $v3\_xxreal\_0 : \iota \Rightarrow o$  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. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k6\_xcmplx\_0 X0 \ k6\_numbers = X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (((r1\_xxreal\_0 \ k6\_numbers X0) \wedge (r1\_xxreal\_0 X0 \ np\_1)) \Leftrightarrow (X0 \in u1\_struct\_0 \ k17\_borsuk\_1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 \ k6\_numbers = k6\_numbers) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (v2\_xxreal\_0 X0)) \Rightarrow (v2\_xxreal\_0 X1))) \quad (6)$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (7)$$

Assume the following.

$$((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \quad (8)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (9)$$

Assume the following.

$$k4\_xcmplx\_0 (k4\_xcmplx\_0 np\_2) = np\_2 \quad (10)$$

Assume the following.

$$k4\_xcmplx\_0 (k4\_xcmplx\_0 np\_1) = np\_1 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k9\_real\_1 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k8\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (13)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (14)$$

Assume the following.

$$k5\_topmetr = k17\_borsuk\_1 \quad (15)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2\_struct\_0 \\ & X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \wedge (((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_pre\_topc X1) \wedge (l1\_pre\_topc X1))) \wedge ((m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0)) \wedge (m1\_subset\_1 X3 (u1\_struct\_0 X1)))))) \Rightarrow (k4\_borsuk\_1 X0 X1 \\ & X2 X3 = k4\_tarSKI X2 X3) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\exists X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \wedge ((\neg v1\_xboole\_0 X1) \wedge (v2\_compts\_1 X1 X0))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & (\neg v2\_struct\_0 k17\_borsuk\_1) \wedge ((v1\_pre\_topc k17\_borsuk\_1) \wedge ( \\ & v2\_pre\_topc k17\_borsuk\_1)) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3\_topmetr X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (v3\_membered \\ & (u1\_struct\_0 X0)) \end{aligned} \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1\_xreal\_0 X0) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge \\ & (v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \end{aligned} \quad (21)$$

Assume the following.

$$v3\_topmetr k17\_borsuk\_1 \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_xxreal\_0 X0) \wedge (v1\_xreal\_0 X0)) \wedge \\ & ((\neg v3\_xxreal\_0 X1) \wedge (v1\_xreal\_0 X1))) \Rightarrow (\neg v2\_xxreal\_0 (k3\_xcmplx\_0 \\ & X0 X1)) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v3\_xxreal\_0 X0) \wedge (v1\_xreal\_0 X0)) \Rightarrow ((v1\_xcmplx\_0 \\ & (k4\_xcmplx\_0 X0)) \wedge (\neg v2\_xxreal\_0 (k4\_xcmplx\_0 X0))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \quad (25)$$

Assume the following.

$$\begin{aligned} & m1\_subset\_1 k6\_borsuk\_6 (k1\_zfmisc\_1 (u1\_struct\_0 (k2\_borsuk\_1 \\ & k5\_topmetr k5\_topmetr))) \end{aligned} \quad (26)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (27)$$

Assume the following.

$$l1\_pre\_topc \ k17\_borsuk\_1 \quad (28)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \ (k2\_borsuk\_1 \\ k5\_topmetr \ k5\_topmetr)))) \Rightarrow ((X0 = k6\_borsuk\_6) \Leftrightarrow (\forall X1.( \\ X1 \in X0) \Leftrightarrow (\exists X2.(m1\_subset\_1 \ X2 \ (u1\_struct\_0 \ k5\_topmetr)) \wedge \\ (\exists X3.(m1\_subset\_1 \ X3 \ (u1\_struct\_0 \ k5\_topmetr)) \wedge ((X1 = \\ k4\_borsuk\_1 \ k5\_topmetr \ k5\_topmetr \ X2 \ X3) \wedge (r1\_xxreal\_0 \ X3 \ (k9\_real\_1 \\ np\_1 \ (k8\_real\_1 \ np\_2 \ X2)))))))) \quad (29) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski \ X0 \ X1 = k2\_tarski \ (k2\_tarski \ X0 \ X1) \ (k1\_tarski \ X0) \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 \ X0) \wedge (v1\_xxreal\_0 \ X1)) \Rightarrow ( \\ (r1\_xxreal\_0 \ X0 \ X1) \vee (r1\_xxreal\_0 \ X1 \ X0)) \quad (31)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ k1\_numbers)) \Rightarrow (v3\_membered \ X0) \quad (32)$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0 \ X0) \wedge (v3\_xxreal\_0 \ X0)) \Rightarrow ((\neg v1\_xboole\_0 \ X0) \wedge ((v1\_xxreal\_0 \ X0) \wedge (\neg v2\_xxreal\_0 \ X0))) \quad (33)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 \ X0) \Rightarrow (v1\_xxreal\_0 \ X0) \quad (34)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 \ X0) \Rightarrow (v1\_xcmplx\_0 \ X0) \quad (35)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k1\_numbers) \Rightarrow (v1\_xreal\_0 \ X0) \quad (36)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 \ X0) \Rightarrow (\forall X1.(m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0)) \Rightarrow (v1\_xboole\_0 \ X1)) \quad (37)$$

Assume the following.

$$\forall X0.(v3\_membered \ X0) \Rightarrow (\forall X1.(m1\_subset\_1 \ X1 \ X0) \Rightarrow (v1\_xreal\_0 \ X1)) \quad (38)$$

**Theorem 1**

$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k5\_topmetr)) \Rightarrow (k4\_tarski$   
 $k6\_numbers X0 \in k6\_borsuk\_6)$