

## t36\_borsuk\_7

(TMWAur9yVL1rYvq2EK18PTzpoVYZjeWtSUZ)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_topmetr : \iota$  be given. Let  $k3\_numbers : \iota$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_0 : \iota$  be given. Let  $k1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_topalg\_2 : \iota$  be given. Let  $k5\_toprealb : \iota \Rightarrow \iota$  be given. Let  $c15\_borsuk\_7 : \iota$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 k3\_topmetr))) \Rightarrow \\ (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2.(v1\_xxreal\_0 X2) \Rightarrow ( \\ (X0 = k2\_rcomp\_1 X1 X2) \Rightarrow (v3\_pre\_topc X0 k3\_topmetr)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski (k3\_xboole\_0 X0 X1) X0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (k9\_subset\_1 X0 X1 X2 = k3\_xboole\_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (k8\_subset\_1 X0 X1 X2 = k3\_xboole\_0 X1 X2) \quad (5)$$

Assume the following.

$$k2\_topalg\_2 = k3\_topmetr \quad (6)$$

Assume the following.

$$u1\_struct\_0 (k1\_pre\_topc k3\_topmetr (k5\_toprealb c15\_borsuk\_7)) = c15\_borsuk\_7 \quad (7)$$

Assume the following.

$$v1\_xxreal\_0 k2\_xxreal\_0 \quad (8)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow (l1\_pre\_topc X1)) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers)) \Rightarrow (m1\_subset\_1 (k5\_toprealb X0) (k1\_zfmisc\_1 (u1\_struct\_0 k2\_topalg\_2))) \quad (10)$$

Assume the following.

$$(v2\_pre\_topc k3\_topmetr) \wedge (l1\_pre\_topc k3\_topmetr) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k2\_rcomp\_1 X0 X1) (k1\_zfmisc\_1 k1\_numbers)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((l1\_pre\_topc X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v1\_pre\_topc (k1\_pre\_topc X0 X1)) \wedge (m1\_pre\_topc (k1\_pre\_topc X0 X1) X0)) \quad (13)$$

Assume the following.

$$m1\_subset\_1 c15\_borsuk\_7 (k1\_zfmisc\_1 k1\_numbers) \quad (14)$$

Assume the following.

$$c15\_borsuk\_7 = k3\_numbers \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers)) \Rightarrow (k5\_toprealb X0 = X0) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(l1\_pre\_topc\ X1) \Rightarrow (( \\ & m1\_pre\_topc\ X1\ X0) \Leftrightarrow ((r1\_tarSKI\ (u1\_struct\_0\ X1)\ (u1\_struct\_0 \\ & X0)) \wedge (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))) \Rightarrow \\ & ((v3\_pre\_topc\ X2\ X1) \Leftrightarrow (\exists X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1 \\ & (u1\_struct\_0\ X0))) \wedge ((v3\_pre\_topc\ X3\ X0) \wedge (X2 = k8\_subset\_1\ (u1\_struct\_0 \\ & X0)\ X3\ (u1\_struct\_0\ X1)))))))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)) \Rightarrow (k9\_subset\_1\ X0\ X1\ X2 = k9\_subset\_1\ X0\ X2\ X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0\ X0\ X1 = k3\_xboole\_0\ X1\ X0 \quad (19)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (v1\_xxreal\_0\ X0) \quad (20)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ & (u1\_struct\_0\ k3\_topmetr))) \Rightarrow ((X1 = k3\_numbers) \Rightarrow ((v3\_pre\_topc \\ & (k9\_subset\_1\ k1\_numbers\ k3\_numbers\ (k2\_rcomp\_1\ k2\_xxreal\_0\ X0)) \\ & (k1\_pre\_topc\ k3\_topmetr\ X1)) \wedge (m1\_subset\_1\ (k9\_subset\_1\ k1\_numbers \\ & k3\_numbers\ (k2\_rcomp\_1\ k2\_xxreal\_0\ X0))\ (k1\_zfmisc\_1\ (u1\_struct\_0 \\ & (k1\_pre\_topc\ k3\_topmetr\ X1)))))))))) \end{aligned}$$