

# t8\_borsuk\_6 (TMbu- VGvu6KpwBZwhYonNhewRDoAijY4pj8a)

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Let  $m1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k5\_topmetr : \iota$  be given. Let  $k17\_borsuk\_1 : \iota$  be given. Let  $k18\_borsuk\_1 : \iota$  be given. Let  $k19\_borsuk\_1 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $v1\_borsuk\_2 : \iota \Rightarrow o$  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  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_t\_0topsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (k1\_funct\_1 (k4\_relat\_1 X1) X0 = X0) \quad (2)$$

Assume the following.

$$\forall X0. k6\_partfun1 X0 = k4\_relat\_1 X0 \quad (3)$$

Assume the following.

$$k5\_topmetr = k17\_borsuk\_1 \quad (4)$$

Assume the following.

$$v1\_borsuk\_2 k17\_borsuk\_1 \quad (5)$$

Assume the following.

$$(\neg v2\_struct\_0 k17\_borsuk\_1) \wedge ((v1\_pre\_topc k17\_borsuk\_1) \wedge (v2\_pre\_topc k17\_borsuk\_1)) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1\_pre\_topc X0) \Rightarrow & ((v1\_funct\_1 (k3\_struct\_0 X0)) \wedge \\ & ((v1\_funct\_2 (k3\_struct\_0 X0) (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge \\ & ((v5\_pre\_topc (k3\_struct\_0 X0) X0 X0) \wedge (v1\_t\_0topsp (k3\_struct\_0 \\ & X0) X0 X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \quad (9)$$

Assume the following.

$$\forall X0. (v1\_partfun1 (k6\_partfun1 X0) X0) \wedge (m1\_subset\_1 (k6\_partfun1 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \quad (10)$$

Assume the following.

$$m1\_subset\_1 k19\_borsuk\_1 (u1\_struct\_0 k17\_borsuk\_1) \quad (11)$$

Assume the following.

$$m1\_subset\_1 k18\_borsuk\_1 (u1\_struct\_0 k17\_borsuk\_1) \quad (12)$$

Assume the following.

$$l1\_pre\_topc k17\_borsuk\_1 \quad (13)$$

Assume the following.

$$\forall X0. (l1\_struct\_0 X0) \Rightarrow (k3\_struct\_0 X0 = k6\_partfun1 (u1\_struct\_0 X0)) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_borsuk\_2 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow & (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 \\ & X3 (u1\_struct\_0 k5\_topmetr) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X3 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 k5\_topmetr) (u1\_struct\_0 \\ & X0)))))) \Rightarrow ((m1\_borsuk\_2 X3 X0 X1 X2) \Leftrightarrow ((v5\_pre\_topc X3 k5\_topmetr \\ & X0) \wedge ((k1\_funct\_1 X3 k6\_numbers = X1) \wedge (k1\_funct\_1 X3 np\_1 = X2)))))) \end{aligned} \quad (15)$$

Assume the following.

$$k19\_borsuk\_1 = np\_1 \quad (16)$$

Assume the following.

$$k18\_borsuk\_1 = k6\_numbers \quad (17)$$

**Theorem 1**

*m1\_borsuk\_2 (k3\_struct\_0 k5\_topmetr) k17\_borsuk\_1 k18\_borsuk\_1  
k19\_borsuk\_1*