

## l16\_borsuk\_2

(TMa8rPNhcrSWozbzzvv3kaNrrd8nstzmN49)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  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  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_0 : \iota$  be given. Assume the following.

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

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k6\_xcmplx\_0 X0 k6\_numbers = X0) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(v1\_xreal\_0 X3) \Rightarrow (((r1\_xxreal\_0 \\ X0 X1) \wedge (r1\_xxreal\_0 X2 X3)) \Rightarrow (r1\_xxreal\_0 (k6\_xcmplx\_0 X0 X3) ( \\ k6\_xcmplx\_0 X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

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

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (6)$$

Assume the following.

$$k6\_xcmplx\_0 np\_1 np\_1 = np\_0 \quad (7)$$

Assume the following.

$$r1\_xreal\_0 \text{ } np\_1 \text{ } np\_1 \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 \text{ } X0 \text{ } k1\_numbers) \wedge (v1\_xreal\_0 \text{ } X1)) \Rightarrow (k9\_real\_1 \text{ } X0 \text{ } X1 = k6\_xcmplx\_0 \text{ } X0 \text{ } X1) \quad (9)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (10)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 \text{ } X0) \Rightarrow (v1\_xcmplx\_0 \text{ } X0) \quad (11)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \text{ } X0 \text{ } k1\_numbers) \Rightarrow (v1\_xreal\_0 \text{ } X0) \quad (12)$$

**Theorem 1**

$$\forall X0. (m1\_subset\_1 \text{ } X0 \text{ } k1\_numbers) \Rightarrow (((r1\_xreal\_0 \text{ } k6\_numbers \text{ } X0) \wedge (r1\_xreal\_0 \text{ } X0 \text{ } np\_1)) \Rightarrow ((r1\_xreal\_0 \text{ } k6\_numbers \text{ } (k9\_real\_1 \text{ } np\_1 \text{ } X0)) \wedge (r1\_xreal\_0 \text{ } (k9\_real\_1 \text{ } np\_1 \text{ } X0) \text{ } np\_1)))$$