

t68_borsuk_5

(TMX2obvNhFQL9LKz7UUmyFf1tF5rLSw4VDp)

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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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k4_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $k1_seq_4 : \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k3_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. k4_xboole_0 (k4_xboole_0 X0 X1) X2 = k4_xboole_0 X0 (k2_xboole_0 X1 X2) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (k6_subset_1 (k4_xxreal_1 X0 k1_xxreal_0) (k1_tarski X1) = k2_xboole_0 (k4_xxreal_1 X0 X1) (k4_xxreal_1 X1 k1_xxreal_0)))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (k6_subset_1 (k4_xxreal_1 k2_xxreal_0 X0) (k3_xxreal_1 k2_xxreal_0 X1) = k4_xxreal_1 X1 X0)) \quad (3)$$

Assume the following.

$$k1_numbers = k4_xxreal_1 k2_xxreal_0 k1_xxreal_0 \quad (4)$$

Assume the following.

$$u1_struct_0 k3_topmetr = k1_numbers \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k4_rcomp_1 X0 X1 = k3_xxreal_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (k2_rcomp_1 X0 X1 = k4_xxreal_1 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k1_seq_4 X0 = k1_tarski X0) \quad (10)$$

Assume the following.

$$v1_xxreal_0 k2_xxreal_0 \quad (11)$$

Assume the following.

$$v1_xxreal_0 k1_xxreal_0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (m1_subset_1 (k4_rcomp_1 X0 X1) (k1_zfmisc_1 k1_numbers)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (m1_subset_1 (k2_rcomp_1 X0 X1) (k1_zfmisc_1 k1_numbers)) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (m1_subset_1 (k1_seq_4 X0) (k1_zfmisc_1 k1_numbers)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k3_subset_1 X0 X1 = k4_xboole_0 X0 X1) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (17)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k3_topmetr))) \Rightarrow \\ & \quad (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (((\\ r1_xxreal_0 X1 X2) \wedge (X0 = k4_subset_1 k1_numbers (k4_rcomp_1 k2_xxreal_0 \\ X1) (k1_seq_4 X2))) \Rightarrow (k3_subset_1 (u1_struct_0 k3_topmetr) X0 = \\ k4_subset_1 k1_numbers (k2_rcomp_1 X1 X2) (k2_rcomp_1 X2 k1_xxreal_0)))))) \end{aligned}$$