

t74_borsuk_5

(TMHZ4AKrmCDVxfiCR8bZxC5PNt7LbSYVsn2)

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Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topmetr : \iota$ 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 $k1_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_xxreal_2 : \iota \Rightarrow o$ be given. Let $v3_xxreal_2 : \iota \Rightarrow o$ be given. Let $k3_seq_4 : \iota \Rightarrow \iota$ be given. Let $k2_seq_4 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v2_compts_1 X0 k3_topmetr) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\ (u1_struct_0 k3_topmetr)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ k1_numbers)) \Rightarrow ((X1 = X0) \Rightarrow ((v4_xxreal_2 X1) \wedge (v3_xxreal_2 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k5_seq_4 X0 = k3_seq_4 X0) \quad (3)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k4_seq_4 X0 = k2_seq_4 X0) \quad (4)$$

Assume the following.

$$\forall X0. (v3_membered X0) \Rightarrow (v1_xreal_0 (k3_seq_4 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (v3_membered X0) \Rightarrow (v1_xreal_0 (k2_seq_4 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v3_membered\ X0) \Rightarrow ((v3_xxreal_2\ X0) \Rightarrow ((v1_xboole_0 \\ X0) \vee (\forall X1.(v1_xreal_0\ X1) \Rightarrow ((X1 = k3_seq_4\ X0) \Leftrightarrow ((\forall X2. \\ (v1_xreal_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0\ X1\ X2)))) \wedge (\forall X2. \\ (v1_xreal_0\ X2) \Rightarrow (\neg(\neg r1_xxreal_0\ X2\ k6_numbers) \wedge (\forall X3. \\ (v1_xreal_0\ X3) \Rightarrow (\neg(X3 \in X0) \wedge (\neg r1_xxreal_0\ (k9_binop_2\ X1\ X2)\ X3))))))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v3_membered\ X0) \Rightarrow ((v4_xxreal_2\ X0) \Rightarrow ((v1_xboole_0 \\ X0) \vee (\forall X1.(v1_xreal_0\ X1) \Rightarrow ((X1 = k2_seq_4\ X0) \Leftrightarrow ((\forall X2. \\ (v1_xreal_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0\ X2\ X1)))) \wedge (\forall X2. \\ (v1_xreal_0\ X2) \Rightarrow (\neg(\neg r1_xxreal_0\ X2\ k6_numbers) \wedge (\forall X3. \\ (v1_xreal_0\ X3) \Rightarrow (\neg(X3 \in X0) \wedge (\neg r1_xxreal_0\ X3\ (k10_binop_2\ X1\ X2))))))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers)) \Rightarrow (v3_membered\ X0) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((v2_compts_1\ X0\ k3_topmetr) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1 \\ (u1_struct_0\ k3_topmetr)))) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ k1_numbers)) \Rightarrow (\forall X2.(v1_xreal_0\ X2) \Rightarrow (((X2 \in X1) \wedge (X1 = X0)) \Rightarrow \\ ((r1_xxreal_0\ (k5_seq_4\ X1)\ X2) \wedge (r1_xxreal_0\ X2\ (k4_seq_4\ X1)))))) \end{aligned}$$